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PREFACE

TO

THE FIRST EDITION.

My object in the composition of the following Treatise, has been to present the unprofessional reader with a clear and correct description of the nature, symptoms, causes, distinction, and most approved treatment of the diseases to which the human frame is liable; conceiving that such a work cannot fail to be useful to clergymen, the heads of families, travellers, and persons proceeding to a foreign climate. The chief design of the writer of a work of this description, should be, I conceive, to lay before his readers a just and clear view of the nature of the different maladies treated of, and the best and most manageable remedies for the relief of pain and irritation, and the cure of disease; and these are the objects which I have constantly kept in view throughout the volume, and to the accomplishment of which, every consideration of minor importance has been sacrificed. Long introductions to any particular part of the book, or to any individual class of diseases, have therefore been avoided; and, for the same reason, I have omitted any dissertation on the passions, believing that the space which would be occupied by such essays is far better allotted to a fuller and more exact account of the application of remedies for the relief of disease, and of the opinions and practice of the most able professional men. In every instance, the head of TREATMENT has received from me the greatest attention, because it has been considered the most important, and under this division, the plan or plans of management which are generally applicable to the particular malady treated of, and which are the most certain of success, in the majority of cases, have in general been first laid down, and afterwards almost every other useful remedy has been described

separately; so that the reader will, I hope, find a determinate mode of treatment, of general and superior efficacy, detailed under each complaint for which he may be desirous of prescribing, and thus be preserved from doubt and anxiety as to those remedies which merit his first and chief regard.

With respect to the remedial measures recommended, I would remark, that I have found the soothing plan of treating diseases, to be almost invariably the most successful, and the best, and it will be perceived, that this conviction has constantly influenced me in the advice and instructions now offered. On this point, no higher general principle can be presented for the reader's consideration and guidance, than this,—THE RELIEF OF IRRITATION IS THE GREAT OBJECT OF MEDICINE. This truth he will do well to bear in mind, whenever he wishes to alleviate bodily sufferings in himself or others; for he will uniformly find, that those means which are the most powerful in allaying irritation, are the most speedy and effectual in the relief and cure of disease.

I would add, that it is this fact chiefly which has urged me to oppose, to the best of my ability, in this volume, as well as in my *Treatise on Indigestion*, the frequent and excessive use of mercury, a practice far more general and destructive than is commonly apprehended. Mercurial preparations (especially calomel) are of inestimable value; but, in their use, it must never be overlooked, that the quantity ought necessarily, in ordinary cases, to be small. Mercury, taken in small doses, soothes and tranquillizes the disordered system, and often proves the most certain and most powerful means of recovery; but carried beyond the proper point of quantity, it becomes highly irritating, and, for the most part, permanently deleterious.

I am desirous of saying a few words also in regard to the exercise of patience and perseverance in the employment of medicines. The human body often falls quickly into a state of debility and disease, but, from such a condition, the progress

towards recovery is generally slow, (although it may be certain,) even under the use of the most efficient means of cure; consequently, when any advantage is gained, in the beginning, from the administration of medicine, we have much reason to be satisfied, and both our wisdom and strength will lie in following up this advantage by perseverance in nearly the same measures. In the practice of medicine, small beginnings frequently ripen into grand results, and it is too often from a disregard of this truth, and a foolish desire to try new plans of treatment, that persons afflicted with severe diseases fail to get well.

In conclusion, it is proper for me to say, that I am aware there are already two or three treatises on domestic medicine before the public, but I differ from the authors of those works in many points, both of arrangement and practice, and have thought there is sufficient room for the publication of another book of this description. Whether or not I am correct in this opinion the public will decide. It is for their benefit the present volume has been written, and it will afford me no small gratification to find that it is approved, and is capable of being extensively useful.

PREFACE TO THE THIRD EDITION.

The present Work has gone through two editions, (consisting of a very large number of copies,) in little more than sixteen months, and having been called upon to prepare another edition for the press, it has been my endeavour to render it still more worthy of public confidence. I have reason to believe that the book has been much approved, which has been very gratifying to my feelings; but to this point I think it unnecessary to advert further. Notwithstanding that an attempt, (feeble, indeed, in effect, but strong in desire,) has been made to raise a prejudice against the volume, yet I am not at all disposed to dwell

on the flattering reports made respecting my own publications, believing that every author acquainted with his subject, whose aim is to disseminate useful knowledge, and to warn against pernicious errors, may leave his countrymen at large altogether to decide on the merits of his production, and rest assured that, however strenuously soever the interested and malevolent may exert themselves to deprive him of his reward, the tribunal of public opinion will do him ample justice.

It is, however, proper to observe, that in the original composition of this volume, and in its subsequent revision, I have uniformly and earnestly endeavoured to exhibit the real value of different opinions, and modes of medical practice, being desirous throughout to divest myself of all undue partiality, either to the one side or the other, so that my readers may be enabled to recognize here a fair and unbiassed statement of the real and relative value of prevailing and opposite sentiments, so far as my ability enables me to state them. In all the affairs of human life, it is unhappily too frequently found, that prepossession, prejudice, or interested motives, exert a powerful sway, as well over the judgment as the affections of mankind, and hence have arisen the error, misrepresentation, and conflict, so remarkably conspicuous in medical writings and opinion. Of course I cannot hope that the present sheets will be found free from imperfection, but if I have erred, I enjoy the sweet satisfaction of knowing, that it has not only not been wilful, but also not without a most sincere and resolute endeavour to state the *real truth*. In no case, to my knowledge, have I delivered an opinion, more especially if relating to practical matters, which has not been verified by personal experience, or sanctioned by the authority of distinguished professional men, whose veracity is undoubted.

The present edition has been enlarged by the addition of fifty pages of letter-press, which I hope will be found to contain matter both interesting and valuable.

PREFACE TO THE PRESENT, OR SIXTH EDITION.

I would here simply remark, that the call for another edition of this book has afforded me an additional opportunity for revising the whole, and of making such additions and improvements as my time allowed. The reader will, therefore, find some new articles inserted, which were overlooked in the former editions, and likewise some, I trust, valuable improvements in very many diseases; indeed, every disease in the book has received additions, and there is an increase of above seventy pages of letter-press beyond what is found in any former edition.

I beg to recommend to the female part of my readers, my TREATISE ON THE DISEASES OF FEMALES, which contains the proper management of women before and after delivery, with an ample consideration of many points of uncommon consequence, especially to persons living in the country, or embarking for foreign lands.

T. J. G.

Croydon,
near London,
December 1834.

N.B. *The reader's attention is requested to the following remarks.*

1. By the term *disorder of function* is here meant, a derangement of the natural or healthy functions of the organ or part affected. For example, a disordered liver, or a disorder of the stomach, indicates a derangement of the biliary secretion, or a derangement in the secretions and general functions of the stomach.

2. By *organic disease*, or *organic injury*, is meant actual disease in the structure of the part affected. A diseased liver or stomach, therefore, means an actual alteration in the structure of the liver or stomach; which, for the most part, is incurable, except in the incipient stage, but commonly admits of great relief. Persons with organic disease may live and enjoy a large measure of comfort for many years, provided their method of living is well regulated.

3. As disorders or diseases of the lungs form so large a proportion of our bodily maladies, the reader will find it necessary to have some clear ideas of the structure of the lungs, in order to understand what is said of the nature and causes of *asthma*, *cough*, &c. I would, therefore, remark, that the most accurate investigations seem to prove that the pulmonary organs are principally composed of the windpipe, and its terminations called *bronchia*, which, at their extremities, are subdivided into a multitude of small canals, terminated by culs-de-sac of a globular form, grouped somewhat in the manner of the terminal branchlets of the cauliflower. So that we may say, that the parenchyma, or substance of the lungs, is formed by the aggregation of a multitude of small vesicles (called air cells,) of an irregularly spheroid or ovoid figure, full of air, and separated from each other by opaque white partitions.

I am requested to state, that Mr. Watts, Druggist, (who prepares the Alkaline Solution,) *is removed to* 17, *Strand.*

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DOMESTIC

MATERIA MEDICA.

PART I.

MATERIA MEDICA is that department of the science of medicine, that treats of the nature and properties of the substances which are employed as remedies to restore health to animal bodies when diseased. It constitutes the first part of the present work, and contains an account of the medical virtues, doses, and different preparations, of all such medicines as are used in domestic practice; and with the use of which it is advisable for every one to be in some measure acquainted. Appended to it is a copious collection of approved prescriptions adapted to family use; and a description of the properties, virtues, and correct manner of using the different mineral waters of Europe, and the warm, cold, and vapour baths.

ALOES.

Aloes is a bitter, warm, stimulating purgative, of slow solution, and which acts chiefly on the lower intestines. It empties the large intestines without making the stools thin, and is a very useful purgative, especially in the habitual costiveness of the sedentary and hypochondriacal, or that arising in *jaundice*, *green-sickness*, and *scrophula*. It likewise promotes the monthly flow in women, and the discharge from piles in men, and, therefore, when a stoppage of these discharges has been followed by injurious effects, it should always form a part of the opening medicine administered; on the contrary, when these fluxes are already too profuse, or apt to recur on the operation of slight causes, aloes should never be given.

The dose is from five to fifteen grains, made into a pill with a little soap and mucilage of gum arabic; but it is almost always best given in combination with colocynth and myrrh, &c. as in the compound colocynth pill. Aloes forms the basis of most of the aperient pills in common use, such as Dixon's, Hooper's,

and Fothergill's Antibilious Pills. Lady Webster's, or Lady Crespigny's dinner pill, is made by mixing three drachms of the best aloes with one drachm of mastic and one of red roses, which are to be beat into a mass with a sufficient quantity of syrup of wormwood, and divided into one hundred pills. One, two, or three of them are taken every day an hour before dinner. They produce a copious and bulky evacuation, and, when they agree, increase the appetite.

The *beaume de vie*, or compound decoction of aloes, presents an excellent form of taking aloes. In this way it does not at all injuriously affect the *rectum*.

There are several kinds of aloes, the best of which are the socotorine, which is in small pieces of a reddish brown colour.

ALKALINE SOLUTION.

This medicine is a solution of lime, the ashes of the ash tree, &c. in water, and appears to have been first recommended to public attention by Mr. Brandish, of Alcester, Surgeon to His Royal Highness the Duke of Sussex, as a valuable remedy in king's evil, general debility, and other chronic complaints. I know from personal experience, that it is sometimes of great utility in *indigestion*, *bilious complaints*, *red gravel* and *stone*, and general weakness accompanied with a sense of fluttering about the heart. Under the head of *Indigestion*, I have noticed the description of cases in which it is more especially useful. An elderly lady was some time since complaining much of languor, weakness, drowsiness, and an uncomfortable sensation of fluttering about the region of the heart, occasionally accompanied with deficient appetite, to whom I recommended a trial of this alkali, in doses of a tea-spoonful twice a day, in a tea-cupful of milk and water. She, in consequence, immediately commenced it, and after taking it for three or four weeks, found her spirits much enlivened, and her appetite and strength greatly increased; and by continuing it a short time longer, the sense of fluttering entirely left her, and she became quite well, after having tried in vain various tonic medicines, recommended to her by several professional men whom she had previously consulted. Its powers of neutralizing morbid acidity in the stomach, and thus curing heart-burn, are scarcely to be equalled by any other medicine, excepting the carbonate of ammonia; and so great has been its value from possessing this effect, and the power of increasing the appetite and general strength, that many persons, after taking a first quantity, have sought eagerly for a second. I was told by a skilful surgeon at Cheltenham, who

had administered it to several respectable patients there, that his supply was unavoidably exhausted for several days before he could get more, during which short period the applications from his patients for fresh supplies were numerous, and pressing. In *red* gravel, and in stone, it is an appropriate and most efficacious remedy.

Its administration is attended with good effects both in chronic and acute gout, during the intervals of the fits. It is also very beneficially employed in the decline of gouty attacks, when the critical evacuations cease too soon from want of constitutional energy, or when they, on the other hand, continue too long, and occasion debility; in the complaints of the stomach, as heart-burn, loss of appetite, &c. so distressing to the victims of chronic gout; and in the languor and debility succeeding or accompanying gouty attacks. For the relief of these symptoms, the common practice is to give bark, aromatics, steel, or bitters; but the alkaline solution will sometimes be found superior to either of these remedies, or any combination of them, for it unites the powers of an effectual antacid and tonic, proving very grateful to the stomach, and removing costiveness.

Mr. Brandish says, that he has known several cases of spasmodic asthma cured by it; and in the habitual asthma and old coughs of aged persons he speaks well of it. It is likewise of much service in some eruptions of the skin, particularly those which are connected with acidity, and other disorders in the stomach. As a remedy for scrofula, he used it for thirty years, and considered it of great service.

Its obvious qualities are those of a tonic and antacid, which strengthens the stomach, and promotes the appetite. Sometimes great advantage is derived from putting two or three drachms of coarsely powdered rhubarb into a small six-ounce bottle of the alkali. In this state it is called *the alkaline tincture of rhubarb*, and is more aperient than in its simple state, and perhaps more tonic. The proper dose is one or two teaspoonfuls three times a day, in water, milk and water, linseed tea, or any other agreeable vehicle; but it requires to be taken in a good deal of liquid, not less than half a tea-cupful, and all acid, and acid fruit, must be avoided while taking it. *It is prepared by Mr. G. F. Watts, Chemist, No.* 17, *Strand, London, from whom it may always be obtained genuine.*

ANTIMONIAL WINE.

Antimonial wine is made by dissolving a scruple of emetic tartar in eight ounces of boiling distilled water, to which, after filtering, two ounces of rectified spirit of wine must be added.

This preparation is a useful diaphoretic and emetic. In feverish states of the constitution it is usually combined with Mindererus's spirit, and the sweet spirit of nitre, which, with water, forms the common diaphoretic draught. In acute rheumatism it is sometimes of great utility, when in combination with laudanum, especially in the commencement of the disease. A valuable anodyne sudorific is formed of six drachms of antimonial wine and a drachm of laudanum, of which mixture eighteen drops may be taken in water every four or six hours. In this state it determines to the surface, produces perspiration, and relieves pain. Two or three doses of this mixture at bed-time is a very convenient and proper medicine for promoting perspiration, and carrying off cold, in ordinary cases, plenty of warm slop being drank at the same time.

An excellent medicine for eruptions on the skin is made by mixing together four drachms of antimonial wine, one of laudanum, and one of the solution of oxymuriate of mercury; of which from twenty to thirty drops may be taken night and morning, in any agreeable vehicle.

ARSENIC.

The greater part of the white oxyde of arsenic of commerce is obtained in Bohemia and Saxony, in roasting the cobalt ores, in making zaffre, and sometimes by sublimation from arsenical pyrites.

This substance has been long known as the most virulent of the mineral poisons. In a very small quantity it occasions vomiting, purging, tremors, and palsy; in a quantity a little larger, it excites some pain in the stomach, with a sense of heat extending from the gullet, extreme thirst, violent vomiting, with anxiety and depression. Notwithstanding, when properly administered, it is occasionally a medicine of great efficacy, and is employed internally as a tonic, and externally as a caustic.

It is used internally with the best effects in *ague* and *periodic head-ache;* and is sometimes of great service in *leprosy* and other *cutaneous eruptions*, *chronic rheumatism*, *scirrhus*, and *cancer*. It has long been used in Lincolnshire as an empirical medicine, under the name of the "ague drop," with unusual success in the cure of intermittent fever; and Dr. Fowler, of Stafford, has established its reputation as a powerful remedy for periodic head-ache. It sometimes proves of greater benefit in leprous affections and chronic rheumatism, than any other medicine; and is now and then used, with similar advantage, in scirrhous tumours, and open cancer. In some forms of tic douloureux and epilepsy, it has likewise been administered with

success; and also in some anomalous cases of severe nervous disorder. The solution of arsenic was given to a man who had been for four or five years afflicted with trembling of the hands, great irritability, and other severe nervous symptoms, and perfectly cured him.

The internal use of arsenic is improper in all cases attended with strong arterial action, and where there are any pulmonary symptoms; and should a cough even intervene during its use, it should be instantly discontinued. When it is exhibited in proper cases, and with necessary precaution, the effect it produces must be carefully observed: the feeling of swelling and stiffness of the eye-lids and face, heat, soreness and itching of the edges of the eye-lids, or tenderness of the mouth, are indications that the dose of the remedy has been carried to its full extent, and should then be diminished. It should be altogether abandoned if pain of the stomach, nausea, vomiting, head-ache, vertigo, or cough be induced.

The best mode of giving this active substance is in solution, in the form of the arsenical solution of the shops, which may be given in a dose of four drops, twice a day, in any agreeable vehicle, and gradually increased, if necessary, to double that quantity, or more, twice a day.

As an external application, arsenic has been long employed in cases of cancer; and will certainly do much to improve the ulceration, and give it a disposition to contract and heal. But in this point of view it is a less safe and efficacious remedy than preparations of iron. It has been sprinkled in the form of a powder upon the sores: but the most violent pain follows this mode of applying it; and, in some instances, probably from its absorption, the general system has been dangerously affected.

The more usual mode of using it is in the form of a lotion, composed of eight grains of white arsenic, and the same quantity of subcarbonate of potash, dissolved in four fluid ounces of water; or as an ointment, formed by rubbing together one drachm of arsenic and twelve drachms of spermaceti ointment. These applications produce less pain and irritation, cause the diseased parts to slough off, and amend the fetid discharge.

ARTIFICIAL ASSES' MILK.

The value of asses' milk, as an article of diet for the consumptive, is well known, and where it cannot be procured, an excellent substitute for it may be made by pouring half a pint of water of super-carbonate of soda upon two ounces of boiling milk. Or it may be made in the following way:—Take of eryngo root and pearl barley, of each, half an ounce; liquorice root, three ounces;

water, a quart; boil it down on a gentle fire to one pint, then strain it, and add an equal quantity of new cow's milk warm. If eight or ten fine garden snails are bruised together, and boiled in the milk for a quarter of an hour, strained, and then added to the other ingredients, the value of the substitute, as a restorative, will be much increased.

AROMATIC CONFECTION.

Take of cinnamon bark, nutmegs, of each, two ounces; cloves, an ounce; cardamom seeds, half an ounce; dried saffron, two ounces; prepared shells, sixteen ounces; refined sugar, powdered, two pounds; water, a pint. Rub the dry substances mixed together, into a very fine powder; then add the water gradually, and mix until the whole be thoroughly incorporated. This forms the Aromatic Confection of the shops, which is a useful combination of various aromatics, given with advantage in nervous languors, and gout in the stomach. It is a common and valuable addition to the chalk, and other mixtures, administered for the purpose of moderating looseness. The dose is from ten grains to a drachm, or more.

ASSAFŒTIDA.

This article is a gum resin, obtained from the roots of a tree which is a native of the south of Persia. It is brought into this country packed in cases, mats, and casks. The best is clear, and of a pale reddish colour, contains many of the white tears, and has the odour very strong.

It is powerfully antispasmodic, and expectorant, and is given with advantage in *hysterics*, *low spirits*, *flatulent colic*, and in the *coughs* of the aged and the nervous. The dose is from five grains to a scruple, and it is best taken in the form of pills, on account of its nauseous taste. In hysterics, a drachm of assafœtida may be mixed with an ounce and a half of peppermint water, two drachms of ammoniated tincture of valerian, and two drachms of sulphuric ether, of which mixture the dose is a tablespoonful every second hour. When given in a clyster for the cure of flatulent colic, it often operates like a charm. For this purpose two drachms may be mixed with a pint of warm gruel.

Its internal use is improper in inflammatory habits.

BALSAM OF CAPIVI, OR COPAIVA.

This balsam has of late years got much into use in a variety of disorders. The tree from which it is obtained by excision is

a native of South America, and the Spanish West India islands, where it grows in great plenty. The capivi balsam is stimulant, diuretic, and laxative, and seems to act most powerfully on the urinary passages, and on the internal or mucous membrane of the bowels and windpipe. It is, therefore, useful in *the whites*, and in that state of the womb sometimes occurring on the final cessation of the menses, which is accompanied with a thin unhealthy discharge, great bearing down, and many of the symptoms of incipient *cancer*.* It affords considerable relief in *piles* from relaxation, and in *old coughs*. It has been recommended in *consumption*, but in the majority of these cases its heating and irritating qualities will certainly render it injurious. If ever it is of much service in this malady, it is where the disease originates in irritation or ulceration of the windpipe, and its branches, or what is called *catarrhal consumption*. Elderly persons are often troubled with weakness and irritation in the larger bowels, in which case it may prove of much service.

The dose is from twenty drops to a drachm or two twice or thrice a day, either dropped on sugar, or mixed with soft water by means of mucilage of gum arabic. Its taste is nauseous, and it may be taken in the form of pills, by rubbing together two parts of copaiva and one part of carbonate of magnesia, and leaving the mixture for some time at rest, until it become solid, when it may be rolled and divided into pills. If the copaiva be genuine, this mass remains diaphanous.

A considerable quantity of the copaiva sold in England is entirely *factitious*, and I am afraid it is not an easy matter to get it pure. As I have said above, this balsam is a natural production, obtained from trees growing in South America, yet a curious trial took place some time since between the owner of certain premises that were burnt down, and the Governors of the Sun Fire Office, in consequence of the latter refusing to indemnify the proprietor for his loss, because the fire had been occasioned by his *making* Balsam of Capivi.

BALSAM OF PERU.

The tree producing this medicine is a native of the warmest provinces of South America. The balsam is stimulant and tonic, and is of use in *chronic coughs*, *whites*, *palsy*, and *chronic rheumatism*; but it is improper wherever any inflammatory action is present. As an external application, it is employed with advantage in cleansing and stimulating foul and indolent *ulcers*. Dr. Ainslie recommends it as a very efficacious application in

* See the author's *Treatise on the Diseases of Females*.

incipient mortification of the limbs occurring in tropical climates. A piece of lint, large enough to cover the whole of the affected part, is dipped into the balsam, and laid on immediately the gangrene is perceived, and renewed night and morning.

The dose is from ten drops to a drachm, thrice a day.

BALSAM OF TOLU.

This is obtained from the same tree as the preceding, and may be considered as the white balsam of Peru, hardened by exposure to the air. Its virtues and dose are similar to the Peruvian balsam.

The Tolu lozenges are made by mixing together eight ounces of fine sugar, one ounce of cream of tartar, two drachms of starch, and a drachm of the tincture of balsam of Tolu of the Edinburgh Dispensatory, which are brought to a proper consistence, and formed into lozenges, by means of a sufficient quantity of mucilage of gum tragacanth.

BARK.

This heroic medicine, which was formerly called the Peruvian or Jesuits' bark, is now almost always by distinction called the Bark. The Latin name for it is *Cinchona*, and there are three varieties in common use, viz. the yellow, pale, and red bark. The yellow bark is that which is now most frequently used by medical men in this country.

It is well known, that the tree producing this medicine is a native of South America, whence the bark was first introduced into Europe about the year 1640, by the Countess of Cinchon, who, it is asserted, was cured by it of a severe ague, and who was the wife of the Count of Cinchon, Viceroy of Peru. It was sold at first by the Jesuits for its weight in silver, and was consequently very little used; till Talbot, an Englishman, brought it into vogue by the many cures he performed by it in France, under the name of the *English Remedy*. This remedy was an infusion of the bark in Port wine, and so successful was Talbot's practice, that Louis XIV. was induced to purchase at a large price the secret of his specific; and Charles the Second afterwards appointed him one of his physicians. Long since this period, however, warm controversies have at different times been carried on respecting its virtues, and the most injurious consequences have been attributed to its employment, even by respectable physicians. And it is not a little singular and lamentable, that, according to Baron Humboldt, the present people of South America have the most inveterate prejudices

against the employment of the different kinds of *cinchona*, and in the very country where this invaluable remedy grows, they try to cut off the fever by infusions of scoparia *dulcis*, and hot lemonades prepared with sugar and the small wild lime, the rind of which is equally oily and aromatic.

In England, the bark is now universally allowed to be a powerful and permanent tonic, superior to all other remedies in counteracting the diseased actions of *intermittent fever*, and of eminent utility in restoring strength and vigour to the human frame, when weakened by *hectic*, *remittent*, or *typhus fever*, periodical pains, and *acute rheumatism*. A striking circumstance in respect to its operation is, that those diseases are most benefited by it, the exacerbation, or increase of which returns at stated periods; amongst which we find ague and hectic fever, and often head-ache and other pains, hysterics, epilepsy, and acute rheumatism. In the low stage of remittent and typhus fevers, particularly when these are attended with symptoms of putridity, as in jail-fever, putrid sore throat, malignant scarlet fever, confluent small-pox, and in putrid measles, the bark must be regarded as one of the most valuable remedies; and the best adjuncts in these cases are the diluted sulphuric, or the muriatic acid, and the tincture of cayenne pepper. It is likewise useful in some cases of gout, and in the termination of all acute diseases, when the patient is certainly recovering. Should it fail in the cure of ague when used alone, it will often perfectly succeed if infused in Port wine, or mixed with strong brandy and water. The compound tincture of bark is also a useful addition to the decoction and powder.

In indigestion, it is not of so much service, being generally in that complaint inferior to the purer bitters, as the chamomile, gentian, and calumba.

It is given in the form of powder, decoction, infusion, or tincture. The form of powder is that which is in general the most efficacious, but the compound tincture is without doubt an elegant and effectual preparation, being the same as the celebrated tincture of Huxham, who generally gave it in agues and low nervous fevers, in diluted wine or water, with ten drops of the elixir of vitriol in each dose. The dose of the powder is from ten grains to two drachms. In ague, large doses are required even at the commencement; but in other diseases, fifteen grains are sufficient to begin with, which may be repeated every two, three, or four hours, and gradually increased to a drachm. Its taste is best covered by milk, or a strong solution of liquorice, and the dose should be taken directly after it is mixed. The dose of the decoction and infusion is from one to

three ounces, and of the compound tincture from one to three or four tea-spoonfuls.

There is a concentrated preparation of bark lately brought into notice, called *sulphate of quinine*, which is of uncommon utility, and which I have noticed in alphabetical order.

BATTLEY'S SEDATIVE LIQUOR OF OPIUM.

This medicine is similar in its nature and effects to the "*Black Drop.*" It is perhaps a still milder and more valuable preparation of opium than the "*Black Drop.*" The dose is from twenty to forty drops, in any agreeable liquid.

BEAR'S WHORTLE-BERRY.

This medicine is also called *bearberry*, and *trailing arbutus*, It is astringent and tonic, and is sometimes of much service in *gravel*, *ulceration of the bladder* and urinary passages, and when there is an inability of retaining the urine, in consequence of relaxation and weakness of the parts concerned. It has likewise been usefully employed in *diabetes*, and in *consumption*. Dr. Bourne, of Oxford, has spoken very highly of its virtues in the latter disease. His prescription was ten grains of whortle-berry powder, fifteen grains of powder of cinchona bark, and half a grain of opium, in any aromatic or simple water, thrice a day.

The dose of the powder is from a scruple to a drachm, two or three times a day, in any agreeable vehicle; but it often disappoints the expectations of the medical practitioner, from the difficulty of procuring it of a good quality. It ought to have a dark green colour, whereas that usually sold by druggists looks more like dark sand than the powder of a green herb; in this state there can be no doubt of its being quite worthless.

BISMUTH.

The *subnitrate of bismuth*, (formerly called "*Magistery of Bismuth,*") is a tonic and antispasmodic medicine of uncommon efficacy in many cases of *indigestion*, where pain in the stomach is a prominent symptom. It is also of peculiar efficacy in such disorders when accompanied with frequent rejection of water from the stomach, or spasmodic affections, as *epilepsy*, *palpitations of the heart*, and *spasms of the limbs*. The extract of hop commonly affords an excellent means of making it into pills. The dose of bismuth is from two to six or ten grains

twice or thrice a day. I have usually found two grains and a half or three grains, as a dose, quite sufficient.

It has been lately recommended on the continent as a valuable remedy in *Cholera.*

BLACK DROP.

This is a preparation of opium, which has long been sold as a *nostrum.* It is powerfully anodyne, and antispasmodic, producing the ordinary effects of opium, without affecting the head, or confining the bowels. For general use it is certainly preferable to laudanum, or solid opium, but is not superior to *Battley's Solution of Opium.* The secret of its preparation has never been discovered till lately, when the manuscripts of the late Edward Walton, of Sunderland, one of the near relations, it is said, of the original proprietor, fell into the hands of the late Dr. Armstrong, who has published the manner in which it is prepared, which is as follows;—take half a pound of opium sliced, three pints of good verjuice, (juice of the wild crab,) one and a half ounce of nutmegs, and half an ounce of saffron. Boil them to a proper thickness, then add a quarter of a pound of sugar, and two table-spoonfuls of yeast. Set the whole in a warm place near the fire, for six or eight weeks; then place it in the open air till it becomes a syrup; lastly, decant, filter, and bottle it up, adding a little sugar to each bottle.

The ordinary dose of the Black Drop is twelve or twenty drops, one drop being nearly equal to three of laudanum. But it is often given to the extent of twenty or thirty drops at a dose.

BLUE PILL.

The mercurial pill, usually called blue pill, is a mild and valuable alterative, of great service in *disorders of the digestive organs,* and in many severe diseases, which originate in congestion or obstruction, whether external or internal. It was the favourite remedy of that celebrated, but eccentric man, Mr. Abernethy, whose recommendation of it has been the principal cause of its high repute in the present day. He employed it in almost all cases of disease, whatever were the character, stage, or peculiar circumstances of the malady; but he was far more cautious in its exhibition than the generality of his followers, for, under his directions, it was always taken in small doses, and never became injurious. It is, however, a mistaken notion to suppose that it is generally applicable to the stomach and bilious complaints, which are so frequently met with in

medical practice. Many of such cases are of recent origin, accompanied with a considerable share of remaining strength of stomach, and often with some local malady, and then the good effects of the blue pill are frequently very striking; but a great number, perhaps the majority of them, are of some continuance, the stomach being in a very weak, as well as disordered state, when this medicine will often fail to procure any advantage, and, if persisted in, will prove very detrimental. According to my experience, if that sensible and important organ the stomach is much enervated, and rendered very irritable from some *primary* affection of its coats, the blue pill will very generally fail of affording relief; but when its disorder is secondary, and dependent chiefly on previous disease in the bowels, liver, or other abdominal organ, it will frequently work wonders, if judiciously exhibited. It ought to be observed, however, that, as a general remedy, for the correction of internal chronic disorder, or the cure of external disease, it is by no means so eligible and efficacious, as a combination of calomel, antimony, and guaiacum. See the prescription No. 98.

The ordinary dose is five grains every night at bed time; but it is often advisable to limit it to three grains every night, or four grains every other night. Mr. Abernethy frequently did not advance beyond two grains and a half, or three grains, every second night. Some physicians think, that a grain, or a grain and a half, repeated twice or thrice a day, is, in general, preferable to administering the same quantity in a single dose at night, and, no doubt, there are instances in which this plan ought to be preferred.

In all instances, its efficacy is greatly augmented by combining with it small doses of tartarized antimony. The form No. 99, *(Collection of Prescriptions)*, I have found of uncommon service in numerous instances.

BROOM ASHES AND TOPS.

Broom tops are a powerful diuretic, and they likewise often act at the same time by stool, and are, therefore, of much service in *dropsy*. The best form of administering them is in decoction, made by boiling an ounce of the green tops in a pint of water, down to half a pint. The proper dose of this decoction is two table-spoonfuls, which, with twenty drops of sweet spirit of nitre put into it, may be taken every second or third hour till it operates freely. It is a convenient as well as useful medicine for the poor afflicted with the dropsy. Dr. Cullen says it seldom fails to operate both by stool and urine, and by repeated exhibition every day, or every second day,

some dropsies have been cured. Dr. Paris also strongly recommends it, observing that he has frequently exhibited it in the Westminster Hospital with very great success.

Sydenham, and other old writers, were in the habit of recommending the broom ashes, and they are no doubt useful, but are neither so convenient or efficacious as the decoction of the tops. A quotation from Sydenham will be found under the head of *Dropsy*.

BLUE VITRIOL.

Blue vitriol, or sulphate of copper, is powerfully emetic and astringent. In doses of from two to twelve grains, dissolved in two ounces of water, it operates almost instantly as an emetic, and is, therefore, an eligible medicine to excite vomiting when laudanum has been swallowed as a poison. A solution of it in water, is a very beneficial application to indolent and foul ulcers, which it stimulates and cleanses, and thus promotes their healing.

BUCHU LEAVES.

The buchu is a plant whose leaves much resemble senna, and is a native of the Cape of Good Hope. They have long been considered by the natives of the Cape a sovereign remedy for chronic disorders of the bladder, and have recently enjoyed much confidence among British practitioners.

They are warm and aromatic, give tone to the stomach and constitution in general, at the same time that they prevent the formation of *red* gravel; and may be made to act either as a sudorific or diuretic. The usual mode of prescribing them is in the form of infusion; but the tincture of the leaves may be used. The dose of the infusion is an ounce and a half or two ounces; and of the tincture, from one to four drachms, in water, twice or thrice a day. The infusion is made by pouring half a pint of boiling water on half an ounce of the buchu leaves, and, after allowing them to stand four hours, straining it through a linen rag.

BURNT SPONGE.

This article is prepared by cutting sponge into small pieces, then burning it in a covered vessel until it becomes black and friable, when it is rubbed to a very fine powder. In this state burnt sponge is beneficially employed in the cure of *bronchocele*, or *Derbyshire neck*, and other *scrophulous swellings*. If

persevered in, it will almost always reduce the size of such enlargements, and will sometimes perfectly cure them; but it is liable to produce a considerable degree of debility and emaciation, and should, therefore, when practicable, be combined with Peruvian bark. In such a combination, it is often of great service in reducing the size and mitigating the pain of enlarged and diseased testes. It seems to derive its efficacy from the iodine it contains.

The dose is from one to two drachms, twice a day, mixed into the form of an electuary, with powdered cinnamon, Peruvian bark, and honey or treacle.

The purchaser should be careful in procuring this article, as some druggists have been known to substitute for it charcoal powder.

CALOMEL.

This celebrated article is prepared from a mixture, made, according to certain rules, from purified quicksilver, sulphuric acid, common salt, and muriate of ammonia. It was formerly considered to be a muriate of mercury, that is, muriatic acid united with mercury, but is now ascertained to be a chloride of that metal, that is, chlorine combined with mercury. It has been known in pharmacy for upwards of two centuries, is the most useful of the preparations of mercury, and is more generally employed than almost any other remedy in the whole range of the materia medica. It is purgative and antispasmodic, but its most useful properties are those of an alterative and deobstruent, in which, as well as in its influence in checking the progress of *acute inflammation*, its powers are commonly of the highest value, and are often unrivalled. As an alterative and deobstruent, (or remover of obstructions,) it is employed with great advantage in *indolent inflammation of the liver*, *eruptions on the skin*, *glandular enlargements*, *diseased joints*, and in very many other complaints; when it is generally combined with guaiacum and some antimonial preparation, by which its efficacy is much increased. Indeed, so great is its power of altering a diseased condition of action in the smaller vessels of the circulating system, in which morbid action the generality of diseases originate, and really consist, that there is scarcely a chronic complaint in which this mineral may not, at some time or other, either singly, or in combination, be exhibited with much benefit.

In almost all acute inflammations it is of eminent utility after bleeding, and is, perhaps, more to be relied on than any other remedy, particularly in *croup*, and *inflammation of the brain* in

children, vulgarly called water in the head. In all the acute diseases of tropical climates it is unrivalled in efficacy, both on account of the certainty and quickness of its operation.

As a purgative, in doses of three or four grains, mixed with double the quantity of powdered jalap, and repeated twice a week, it is a valuable remedy for worms in children.

But, notwithstanding its admirable properties, there is no medicine which is so much abused both in and out of the profession, for it is daily given in disorders to which it is not, at the time, applicable, and in doses which are highly detrimental. Indigestion, and what are called *bilious* complaints, are now extremely common in great Britain, and for them calomel is considered a sovereign remedy. When the seat of the disorder is chiefly in the liver and bowels, small doses of it are often employed with great advantage, but in large quantities it rarely fails to be injurious. When, however, the stomach is principally affected functionally, it is neither a suitable nor safe medicine, which may also be said of all the mercurial preparations; yet nothing in the practice of medicine is more common, than for both calomel and the blue pill to be given in considerable doses to patients labouring under severe stomach complaints. In such cases its usual effects are, greater loss of appetite, emaciation, debility, lowness of spirits, and general nervous irritability.

At this time it is fashionable for mothers to give their children calomel, even on common and trifling occasions—a very mischievous practice, which cannot be too forcibly condemned. It is, undoubtedly, of great benefit in the diseases of infancy and childhood, but it is too active a substance for a mother to administer upon her own opinion, especially beyond the dose of half a grain. It should never be forgotten by mothers, that when skilfully employed, it is capable of accomplishing the most desirable purposes; but in the hands of the unskilful it quickly becomes a deadly weapon, producing great weakness of the whole digestive tube, general irritation, and emaciation, with other alarming symptoms, which are, for the most part, more or less permanent, on account of the peculiar activity of this mineral.

As an alterative in chronic disorders, the dose is from half a grain to a grain every other day, or once or twice a day, in conjunction with antimony, &c. as in the pill No. 98. Under the heads of *Indigestion* and *Liver Complaints*, and in other places, I have remarked on the proper mode of administering calomel, and therefore shall here only lay it down as a very important rule, that IN ITS USE IT IS A GREAT OBJECT TO PRODUCE AS LITTLE IRRITATION AS POSSIBLE. Should it irritate the bowels,

a little opium or Dover's powder must be added; should it occasion general restlessness and nervousness, the dose ought to be lessened, and if this effect continues several days notwithstanding the attempts to relieve it, it is mostly a clear indication that it is not appropriate. I have shown in a note, under *Liver Complaints*, the extraordinary susceptibility of some constitutions to the action of mercury.

In acute inflammations, it should be given in doses of a grain or two every second, third, or fourth hour, combined with a small portion of powdered opium, to prevent its running off by the bowels. (In hot climates, six, ten, or twelve grains at a dose are frequently required.) As a purgative, the dose is from two to six grains, united with rhubarb, jalap, or compound extract of colocynth. When used for general purposes in the disorders of children, any quantity beyond a grain and a half is a large dose, and all quantities above two grains may be considered large in adult cases. I am fully aware that many respectable medical men use it freely, and commonly in doses of three, four, and five grains in children's complaints, as well as in those of adults; but, in my opinion, this is a practice unscientific, unnecessary, and injurious.

CALUMBA.

Calumba or Columba root comes from the eastern part of southern Africa, and is one of the most valuable bitter tonics and stomachics we possess. It possesses little stimulus or astringency, and is, therefore, particularly adapted as a tonic to cases of *pulmonary consumption*, *hectic fever*, and *indigestion*. It is often of great service in the latter stage of diarrhœa, bilious remittent fever, cholera morbus, and child-bed fever. It also allays the nausea and vomiting which accompanies pregnancy. Some eminent physicians of the present day hold it in high esteem.

The dose of the powdered root is from fifteen grains to half a drachm, repeated three or four times a day. The infusion of columba is also frequently given, but it soon spoils; the dose is an ounce and a half, or two ounces.

CAMPHOR.

The greater part of the camphor brought to Europe is obtained in Sumatra, and is produced by many plants of different kinds. It is a stimulant, disposes to sleep, and determines to the surface of the body. In moderate doses it operates as a cordial, increases the heat of the body, exhilarates, and softens

the pulse: in larger doses, it allays irritation and spasm, abates pain, and induces sleep. As a stimulant, it is beneficially employed in *typhus fever*, *putrid sore throat*, *malignant measles*, and *confluent small pox*. It is also sometimes useful in spasmodic affections, as *hysterics*, *epilepsy*, *Saint Vitus's dance*, and *painful menstruation*. If sleep is required by a patient, and opium disagrees, or is improper on account of the existence of inflammation, camphor may often be given with advantage, in doses of six or eight grains.

It is used with considerable effect, dissolved in oils or spirit of wine, for allaying rheumatic and muscular pains; and, with the addition of laudanum, as in No. 39, it is occasionally of great efficacy, when rubbed on the abdomen, in flatulent colic, dysentery, and looseness. Two drachms of camphor dissolved in an ounce of oil of turpentine, forms a remedy in high repute in tooth-ache, which, put into the hollow of a carious tooth by means of lint, will afford almost immediate relief.

The dose of camphor is from three grains to a scruple, which should be repeated, in general, at short intervals, as its effects are apt to be transient. The bad effects of an over dose are most effectually obviated by opium.

CASCARILLA.

The tree producing the cascarilla bark is a native of the Bahama Islands, and is found also in Jamaica. It is a valuable tonic, possessing aromatic qualities, and is of much service in *indigestion*, the latter stages of *dysentery*, and *looseness*, and in general debility, from whatever cause arising. Its aromatic qualities render it an excellent adjunct to the bark, in *intermittent* and *remittent fevers*, making it to sit easier on the stomach, and increasing its efficacy. Dr. Underwood recommends it in the *gangrenous* or *black thrush*, peculiar to children.

The dose of the powder is from twelve grains to half a drachm three or four times a day. The infusion of cascarilla is a convenient preparation, of which the proper dose is three or four table-spoonfuls.

CASTOR.

This substance is secreted by the beaver, in bags near the rectum. It is antispasmodic, and seems to act more particularly on the womb and its connections. It is supposed to be given with advantage in *hysterics*, *epilepsy*, *low fevers*, and spasmodic affections generally. Some medical men appear to have considerable confidence in its powers, but they seem to

me doubtful. It is a scarce and high-priced article, and is with difficulty obtained unadulterated.

The dose of the powder is from ten grains to a scruple, made into a bolus with conserve of roses. The dose of the tincture is from one to two drachms.

CASTOR OIL.

The plant which yields this oil is a native of the East and West Indies, South America, and Africa. When good, it is thick, viscid, transparent, and colourless, or of a very pale straw colour.

It is a mild purgative, operating very quickly, and with so little irritation as to render it peculiarly fitted for cases in which the stimulating purgatives would prove hurtful, as *piles*, *Devonshire colic*, *inflammation of the bowels*, and all states of *costiveness*, connected with great weakness and irritability of the bowels. It is an excellent purgative for infants and children, and for women in child-bed. But in obstinate constipation, where copious evacuations are required, it is not to be trusted, as it will insinuate itself through the intestinal canal, bringing with it a small portion of the more fluid contents, but leaving behind it the collection of indurated fæces.

The dose is from three tea-spoonfuls to two table-spoonfuls, either floated on a little water, and covered with a small quantity of any ardent spirit; or diffused in a cup of coffee; or in water, by adding to it mucilage of gum arabic, or the yolk of an egg. The addition of one or two tea-spoonfuls of some aromatic tincture, as tincture of cardamoms, occasions it to sit easier on the stomach. One of the most agreeable ways of taking it is, to rub the dose of castor oil in a mortar with the yolk of an egg, and then add two or three table-spoonfuls of cinnamon or peppermint water.

CATECHU.

The tree which yields this article grows plentifully in Hindostan. The catechu which is commonly in use, is in the form of an extract, and was formerly called Terra Japonica, from the supposition that it came from Japan, and was an earth. The dark-coloured is the best. It is one of the most valuable astringents, and is used with the best effects in *bleeding from the anus or womb*, *whites*, *obstinate coughs*, which depend on weakness and relaxation, and in *dysentery* and *looseness*, when the employment of astringents is admissible. The slow solution of a small piece of it in the mouth, is a certain remedy for re-

laxation of the uvula and fauces. It is an excellent astringent in sponginess of the gums, and equal parts of it and Peruvian bark, with one-fourth the quantity of powdered myrrh, forms a valuable dentifrice in such cases. It should not be used in combination with any alkaline or metallic salt, nor with a solution of isinglass.

An ointment composed of four ounces of extract of catechu, five drachms of alum, four ounces of white resin, and ten ounces of olive oil, with a little water to bring it to a proper consistence, is in great repute in India as an application to ulcers.

The dose of catechu may be from ten grains to a drachm. The tincture is a very good preparation; the dose from one to three drachms.

CARBONATE OF AMMONIA.

This salt is a most valuable stimulant, antispasmodic, antacid, and diaphoretic. As a stimulant and antacid, it is beneficially given in *gout*, *hysterics*, and *indigestion*, especially when much acid is present in the stomach, with general languor. It is highly useful in those stomach affections which follow habits of irregularity and debauchery, and in cases of muscular debility, so frequently witnessed as the consequence of chronic rheumatism. In the latter instance it should be given in large doses, as twelve or fifteen grains, or more, thrice a day, in spearmint water, or camphor mixture.

It is also useful in *hoarseness*, depending upon a relaxed state of the throat, and in *malignant scarlet fever*. In the latter complaint, it has been very highly praised, and I think with much reason, as it is a very grateful cordial and stimulant, possessing the rare and valuable properties of moderating and supporting the circulation, without increasing the general excitement or fever, which is precisely what is wanted. Besides this, the ammonia has certainly a very beneficial influence on the skin, tending to relax it, and restore its healthy secretions, at the same time that it is invigorating. In domestic practice, it is a very suitable remedy in bad cases of scarlet fever, from being more manageable than either bark, wine, or any other tonic I am acquainted with.

In indigestion and bilious affections, this medicine will often be found very efficacious, in correcting acidity, relieving languor and chilliness, and exhilarating the spirits; indeed, for the relief of these symptoms, it has scarcely any equal; and an important advantage attending its use is, that the benefit bestowed by it is more or less permanent. The cases most benefited by it, are those in which the pulse is feeble and somewhat hard, in

which the patient complains of great depression, hangs over the fire, and says, that no exercise he can take has the effect of warming him. If the pulse be very hard, and the skin consequently without any remaining softness, it will rarely answer the expectations that may be entertained respecting its utility; but in most other instances of the present class of complaints, it will be found of considerable, and sometimes of remarkable service.

The ordinary dose is from three to ten grains, twice or thrice daily, dissolved in some aqueous vehicle. The dose may be dissolved in three table-spoonfuls of spearmint water, or camphor mixture, to which a tea-spoonful of compound tincture of cinnamon may be added. In some cases, larger quantities are taken. Those who prefer it may take it in pills, by mixing half a drachm with a little extract of chamomile, and dividing the mass into twelve pills, of which one or two may be taken thrice a day. See mixture No. 79.

With the addition of a little scent, it forms the common smelling salts of the shops, and thus applied as a local stimulant to the nostrils, is useful in fainting, hysterics and languor.

CARBONATE OF SODA.

This medicine is antacid, and of use in the removal of obstructions. In disordered states of the digestive functions, it frequently acts with surprising effect, and is scarcely ever without some advantage, as it neutralizes morbid acidity, and seems at all times particularly grateful to the stomach. Carbonate of soda is, therefore, in very general use in *indigestion*, and is usually combined with bitters and tonics, as infusion of gentian, columba, or cascarilla. It is very efficacious in *red gravel*, and sometimes in *gout*. When used in conjunction with tartaric acid and water, it forms soda water, which is an excellent cooling drink, of much service in fevers, and all disorders of the stomach. Notwithstanding, the most valuable medicines may be abused, and many persons use soda too freely, which proves very weakening to the stomach.

The dose is from ten grains to a drachm, twice or thrice a day. When we wish to give it in pills, the dried carbonate must be used.

CARBONATE OF POTASH.

The virtues of this salt are similar to the carbonate of soda, but it is not so mild and pleasant in its operation, and, therefore, the preceding is generally preferred, except in the forma-

tion of saline draughts, in which this has the superiority. The effervescing saline draught, of so much service in all fevers, is made by mixing a scruple of carbonate of potash with a tablespoonful of lemon juice, and three or four ounces of water, which may be sweetened with syrup or sugar.

CHAMOMILE FLOWERS

Are tonic and carminative, and are useful in indigestion, gout, green-sickness, flatulent colic, and chronic weakness of the stomach and bowels. In such cases, they are best given in the form of a cold infusion, or tea, in combination with ginger and carbonate of soda. The warm strong infusion is emetic. The extract of chamomile flowers is an excellent stomachic, possessing little stimulus, and favoring the natural action of the bowels, and is, therefore, a convenient and useful addition to other tonics which we wish to give in the form of pills, as preparations of iron, ipecacuanha, carbonate of soda, &c.

The dose of the powder is from half a drachm to a drachm, twice or thrice a day; of the infusion, from one to two ounces; and of the extract, from ten grains to a scruple.

CINNAMON.

Cinnamon bark is an agreeable astringent and cordial, and as such, is used with advantage in dysentery and looseness, proceeding from a weakened and languid state of the bowels, and in indigestion and chronic nervous debility. It is principally used, however, as an agreeable aromatic adjunct to more powerful articles, as Peruvian bark, &c. which it causes to sit easier on the stomach. The compound powder of cinnamon is a valuable cordial and aromatic, and is given in doses of from eight to twenty grains.

Oil of cinnamon is a powerful stimulant and stomachic, and is used as such in cramps of the stomach, flatulent colic, and nervous languor. The dose is from one to three or four drops, on a lump of sugar.

CHELTENHAM SALTS.

The Cheltenham salts usually sold are little else than common *Glauber's salt.* This fact has been confirmed by the experiments of Mr. Richard Phillips, an eminent chemist in London.* Good Glauber's salt may be bought for a penny an ounce.

* See Annals of Philosophy, No. 61.

The best factitious compound which is vended under the name of Cheltenham salts, is made by rubbing together the following articles:

Best Glauber's Salt	. . . . .	120 grains.
,, Epsom Salt	. . . . .	66 grains.
,, Common Salt	. . . . .	10 grains.
,, Sulphate of Iron	. . . . .	½ grain.

This compound may be kept in a stopper bottle for use, provided the salts are first deprived of their water of crystallization, and in doses of two, three, or four drachms, dissolved in water, will prove an efficacious purgative. The majority of physicians consider it superior to the salt actually obtained by the evaporation of the Cheltenham water itself. Two drachms of this mixture, dissolved in a pint of lukewarm water, and taken regularly every morning before breakfast, will be nearly as efficacious as a pint of the Cheltenham water drunk at the spa, if we except the influence of the *medicina mentis*, or the auxiliary power arising from the change of air and scene, early rising, and more correct habits, which most persons participate in, who visit that delightful watering place. Both the real and artificial Cheltenham water is often of the greatest benefit in *bilious and liver complaints*, *costiveness*, *gall-stone*, and other complaints originating in disorder of the bowels, stomach, and liver.

CHLORIDE OF SODA.

The chlorides of soda and lime are of the highest value in preventing the generation and checking the progress of all malignant fevers, and in destroying the offensive odour arising in sick rooms, and from cancerous and other ill-conditioned ulcers. The uses of these articles demand the attention of masters who keep extensive work-shops, of coroners, undertakers, &c. and the heads of every family, more especially where the family is large. See the articles on *Contagion*, and on *Measles*.

The chloride of soda, largely diluted with water, forms also an excellent lotion for ulcers, particularly for those which are offensive and ill-conditioned.

COLTSFOOT.

This is a well known indigenous plant, which has been used for centuries as an expectorant in coughs and consumption. It has undoubted expectorant and demulcent qualities, and is

tonic, and I think the decoction is a valuable remedy. It is made by boiling two ounces of the plant in a pint and a half of water down to a pint, of which the dose is an ounce and a half or two ounces, thrice a day.

COMMON SALT.

This invaluable article is one of the most abundant productions of nature, being found in almost every country of every quarter of the globe; either existing in mineral springs, or lakes, spread in strata under the surface of the ground, or rising from it into mountains: and to its presence, also, the ocean owes its saltness.* The effects of salt upon the animal and vegetable kingdoms, are striking and important. It is a natural stimulant to the digestive organs, and seems absolutely necessary to the health of the animal body; for those who neglect it as an article of diet, have a weak and depraved digestion, and engender worms, often with a frightful rapidity.† Carnivorous animals are instinctively led to immense distances in pursuit of it; and in the 39th vol. of the London Medical Journal, the case of a Lady is published, who had a natural antipathy to salt, and was, in consequence, most dreadfully infested with worms, during the whole of her life. The principal cause of children being so generally troubled with worms, seems to lie in the pernicious custom of feeding them with a great deal of sweetened food, to the neglect of a daily use of salt.

It is tonic and stimulant. Taken in moderate quantities, it promotes digestion, strengthens the stomach and bowels, assists the natural action of the intestines, and corrects that weakened condition of them which favors the propagation of *worms*. See a valuable case related under the article on *Worms*. The celebrated Dr. Rush, of America, used to employ it largely and successfully to destroy worms. A saturated solution of it in water, forms a powerful local stimulant, of great service in *tooth-ache*, and reducing the size of *scrophulous* and other *tumours*, and in allaying symptoms of heat, irritation, and pain, attendant on various local maladies. For the relief of such symptoms it is a remedy which will be found of unusual advan-

* The salt mines of Wiliska, near Cracow, in Poland, are 6691 feet long, 1115 feet broad, and 743 feet deep. Near Cordova, in Spain, is a mountain of common salt, 500 feet high, and nearly three miles in circumference.

† A mode of punishment formerly existed in Holland, which places the effects resulting from a total disuse of salt, more especially in moist climates, in a striking point of view. The ancient laws of the country ordained men to be kept on bread alone, *unmixed with salt*, as the *severest* punishment that could be inflicted upon them in their moist climate; the effect was horrible: these wretched criminals are said to have been devoured by worms, engendered in their own stomachs.

tage in domestic practice, and being very cheap, and always readily to be procured, I have much pleasure in strongly recommending it to the attention of the public. This solution, when kept constantly applied to the part, is, in some instances, equal to the cure of very large or hard swellings.

To act as a tonic, the dose of salt may be from twelve to forty grains, two or three times a day.

COMPOUND COLOCYNTH PILL.

This pill is a combination of socotorine aloes, scammony, colocynth pulp, sulphate of potash, and oil of cloves, and is one of the most valuable aperients in cases of habitual costiveness, *head-ache*, *sickness at the stomach*, and other disorders depending upon a deranged and confined state of the bowels. It acts mildly and effectually in doses of three, four, or five grains, taken every night, or every second night; and is still more valuable when united with equal quantities of the compound rhubarb pill, or with a little calomel and James's powder.

COMPOUND POWDER OF IPECACUANHA.

This medicine is popularly known by the name of *Dover's powder*. It is frequently referred to in that part of this work which describes the proper treatment of diseases, for it is invaluable in its effects as a remedy to allay pain, determine to the surface of the body, and alter the diseased action of the vessels, in many obstinate complaints. From such operation, it is often of the greatest service in *chronic rheumatism*, and all complaints originating in, or connected with, suppressed perspiration, in *old coughs* and *spasmodic asthma*, and in *dysentery* and *looseness*. In small doses of three or four grains, it operates mildly, safely, and for the most part insensibly; but in doses of eight and ten grains, it acts as a powerful sudorific, occasioning profuse perspiration. Where opium is indicated to relieve pain, or procure sleep, it may often be used with still greater advantage than either laudanum or solid opium, since it does not affect the head, or produce such uncomfortable feelings as are frequently the consequence the day after using those medicines. When given in chronic rheumatism, flying anomalous pains, dysentery, or looseness, &c. the best way of administering it is in doses of three grains, three or four times a day, made into a pill with a little conserve of hips; but if the object is to excite a speedy and profuse perspiration, ten grains is the proper dose.

COMPOUND POWDER OF JALAP

Is milder in its operation than simple jalap powder. It is very serviceable as a purgative, and is useful to children with tumid bellies, in worm cases, and in dropsy. The dose is from one to two scruples for adults, and about half that dose for children.

COMPOUND RHUBARB PILL

Is composed of rhubarb powder, socotorine aloes, myrrh, and oil of peppermint. It is a warm, stomachic, laxative pill, very useful for obviating costiveness, and at the same time giving tone to the bowels in *indigestion*, *gout*, and *hypochondriasis* or low spirits. The dose is eight or ten grains, formed into two pills, and taken once or twice a day. Those who have very weak bowels, and find a difficulty in procuring any aperient medicine sufficiently mild, will find this pill of great value.

COMPOUND SQUILL PILL.

This pill is diuretic and expectorant, and is given with much benefit in *old coughs*, *difficulty of breathing*, and *asthma*. It is likewise useful in *dropsy*, in which case, its efficacy is almost always increased by being combined with a little calomel. The dose is from five to ten grains, repeated thrice a day.

COMPOUND TINCTURE OF BENJAMIN.

This medicine was formerly called Friar's Balsam, and was much used as a stimulating expectorant in *old coughs*, *asthma*, and *shortness of breath*, and as an healing application to *recent wounds* and *indolent ulcers*. It is, however, an improper dressing for recent wounds, because of its stimulating qualities, and of the separation of the resinous ingredients which takes place on its intermixture with the blood: but it is often efficacious in the case of indolent ulcers, and in chronic coughs, and asthma. In the latter cases, its warm balsamic properties render it very grateful and useful to the stomachs of the weakly and aged; and it is not so much employed by medical men as it deserves. The dose is from thirty drops to a drachm, twice or thrice a day, on a lump of sugar, or in mucilage.

COWHAGE.

This medicine is sometimes very efficacious in the expulsion of *worms*, particularly the *round worm*. The best mode of pre-

paring the remedy, is to dip the pods in syrup or treacle, and then with a knife to scrape off the hairs along with the syrup. When the mixture attains the thickness of honey, it is sufficiently impregnated with the hairs, and is fit for use.

The dose of this mixture for a child of three or four years old, is a tea-spoonful, given in the morning for three days, and then followed by a brisk cathartic.

CORROSIVE SUBLIMATE

Is a bi-chloride of mercury, containing twice the proportion of chlorine that calomel does. In large doses this very active medicine is a violent poison; but in small portions it may be used with safety, and often with great advantage in the cure of diseases. The illustrious Boerhaave has remarked, that in the hands of those who know how to employ it, it will sometimes cure obstinate diseases which are not curable by any other remedy, and this I fully believe. In small doses it is a powerful tonic and alterative, and is frequently very beneficial in severe *cutaneous affections*, *chronic rheumatism*, *scrophula*, and various local indurations and ulcerations which depend upon a deranged state of the general health. Sir Astley Cooper strongly recommends it in *scrophulous enlargement of the mesenteric glands* and glands of the neck, indolent enlargement of the joints, and scrophulous inflammation of the eyes of a chronic character. His mode of administering it is, to rub two grains of the oxymuriate of mercury in a mortar, with a table-spoonful of distilled water, then adding seven ounces and a half of compound tincture of bark; of which mixture, two tea-spoonfuls are given twice or thrice a day, in a little water. In this way it has not the specific effect of mercury, but acts merely as a tonic. The best way, however, to exhibit it is, to give from thirty drops to a drachm of the solution of oxymuriate of mercury, according to the London Pharmacopœia, either in water, or a tea-cupful of the compound decoction of sarsaparilla. This dose may be repeated twice or thrice a day, and the sarsaparilla very much increases its efficacy in diseases of the skin, chronic rheumatism, or disorders of the general health. Whatever way it is exhibited, it should be at all times taken on a full stomach, and its successful operation is much increased by drinking plentifully of diluting fluids through the day, such as barley-water, toast-water, &c. Immediately after breakfast and tea, is a very proper time for taking it.

If it should occasion nausea, griping, or purging, the dose should be lessened, and given in conjunction with laudanum.

When corrosive sublimate is taken in over-doses, either by

mistake, or designedly as a poison, the best antidote is white of egg *diluted* with water, which should be given in large frequently repeated doses.

Gowland's Lotion is a solution of *sublimate* in an emulsion of bitter almonds; and it is the active ingredient in *Spilsbury's Anti-scorbutic Drops*, *Solomon's Anti-impetigines*, *Green's Drops*, *Ward's White Drops*, and other celebrated empirical nostrums.

CROTON OIL.

The plant yielding the seed from which this oil is expressed, is a native of the Molucca islands, and of the greater part of the Peninsular of India. It is a powerful purgative, which produces watery stools, and operates in a very short time after it is taken. Indeed, so active a substance is it, that merely applying the cork of the bottle containing it to the tongue, is sufficient directly to purge some people. It has been given with great advantage in *obstinate costiveness*, *madness*, *apoplexy*, and a few other cases in which it is desirable to purge the bowels quickly, and to lessen the quantity of the circulating fluids. But the small doses in which it produces its effects, require the greatest caution to be observed in its administration; and it is scarcely ever applicable to the disorders of the aged and weakly. If the oil is genuine, it will usually operate powerfully in doses of one or two drops, but sometimes it is necessary to carry it as far as four or five drops. It may be made into pills with crumb of bread, or combined with thin mucilage of gum arabic and sugar, in the form of emulsion.

CUBEBS.

Cubebs is a species of Java Pepper. It is diuretic, and slightly purgative, and certainly possesses considerable effect in allaying irritation in the urethra, and mucous membrane of the bowels. It has been much, and successfully used of late, in the cure of gonorrhœa, but my reason for noticing it here, is the belief that it will be found of much service in many cases of *weakness*, *relaxation*, or deficient action in the larger bowels, in which it acts as a mild stimulant and corroborant, that improves the secretions of the parts, and gives a cool sensation to the rectum, in passing the fæces. It will be found useful in piles and whites, and in the chronic affections of other mucous membranes, as in chronic disorder of the bladder, &c.

The best mode of taking it is in powder, in doses of from a scruple to a drachm and a half, four times a day, in water. It is frequently adulterated.

DAFFY'S ELIXIR.

This well-known nostrum is made in a manner very similar to the tincture of senna of the London Pharmacopœia, by macerating senna leaves, carraway and cardamom seeds, and raisins, in proof spirit of wine or brandy. The tincture of senna of the shops will be found quite as efficacious. It is a useful stomachic and purgative, being sometimes very serviceable in *flatulent colic*, *chronic gout*, and as an opening medicine for those whose bowels have been weakened by intemperance. In such cases, its virtues are greatly improved by combining it with tincture of rhubarb, in the proportion of one-third of this tincture to two-thirds of the tincture of senna. This combination is often very useful in correcting a confined and disordered state of the bowels in weakly habits; and, for general use, I consider it more valuable than the true Daffy's Elixir.

The dose of the tincture of senna alone, or combined with the tincture of rhubarb, is from one to two table-spoonfuls, in water.

DANDELION.

Dandelion is aperient, diuretic, and alterative. Boerhaave was partial to its employment, and the German physicians appear to have great confidence in its powers in the cure of *jaundice*, *dropsy*, *obstructions of the liver*, and *cutaneous eruptions* depending upon disorder of the digestive organs. Until lately it has not been much used in England, although it certainly proves an efficacious remedy in some cases of chronic derangement of the functions of the stomach, bowels and liver. The best way of administering it is by boiling two drachms of the sliced root in two pints of water, down to a pint, of which the dose is two ounces, repeated three times a day. The recent root is to be preferred. It may also be given in the form of an extract, of which the dose is from ten grains to a drachm, thrice a day. I have known it of extraordinary service in some disorders of the stomach and liver.

In the case of a man in this place who suffered for several months from great pain in the stomach, attended with a puffy swelling at the pit of the stomach, it proved curative. He had received a violent blow on that part, which immediately laid him aside, and its effects, which were loss of appetite and strength, low spirits, and pain, drove him into a London hospital, whence he returned almost as bad as he went, and was subsequently cured by drinking a decoction of dandelion which he prepared himself, of which he took a tea-cupful twice a day. See another case detailed under *Liver Complaint*.

DOVER'S POWDER.

See COMPOUND POWDER OF IPECACUANHA.

ELIXIR OF VITRIOL.

Elixir of vitriol is the aromatic sulphuric acid of the Edinburgh Pharmacopœia. It is a grateful medicine, and is tonic, antiseptic, and refrigerant. Its tonic and antiseptic powers render it extremely serviceable in *low fevers* of a typhus type, *indigestion*, *diabetes*, and *cutaneous eruptions*. From its astringent properties it is often of great use in *profuse sweating*, and *internal bleedings*, as from the lungs, bladder, bowels, or nose. Dr. Huxham was fond of its use in low fevers, and it was Sydenham's favorite remedy in *spitting of blood*. In the first mentioned cases, as typhus fever, &c. it is usually combined with infusion of bark, gentian, cascarilla, or other vegetable bitters; and in the latter, as internal bleedings, &c. with infusion of roses, or mucilage.

It was at one time extolled as a valuable medicine in pulmonary consumption, but is too often injurious in such cases, from the want of information as to the proper time for its administration. In the first and inflammatory stage, it is certainly hurtful; but in the more advanced periods, when an open ulcer exists in the lungs, it may frequently promote its healing, and from its tonic qualities may become otherwise useful.

The dose is from twenty to forty drops, three or four times a day, in any convenient fluid vehicle. To prevent it from injuring the enamel of the teeth, it may be sucked through a quill. and the mouth should be carefully washed after each dose.

EMETIC TARTAR.

This is the tartarized antimony of the shops. It is emetic, diaphoretic, expectorant, alterative, rubefacient, and sometimes purgative, according to the dose and manner in which it is administered. It is generally considered to be the most important of the antimonial preparations, and some physicians think that by proper management it may supersede the use of all the others, a sentiment in which I cordially unite.

It is given as an emetic in the commencement of *fevers*, in doses of from one to two grains, dissolved in distilled water; but the best mode of giving it is in divided doses, three or four grains being dissolved in four ounces of water, and an ounce of this solution given every quarter of an hour till it operates. It

generally excites full vomiting, and is liable to be more harsh in its operation than the milder emetics, such as ipecacuanha, &c. In fever, croup, and many other cases, however, this is an advantage, and in such maladies, as well as in all morbid affections where the stomach is not easily affected, it is the emetic properly employed; while, when the stomach is irritable, where its contents are merely to be evacuated, or where the system is in a debilitated state, the milder emetics, the best of which is ipecacuanha, should be preferred.

Assisted in its operation by tepid diluting drinks, it may be brought to operate as a diaphoretic, and to produce the effects of antimonials on the general system, relaxing the skin, promoting perspiration, and relieving fever. For this purpose the dose is from one-sixteenth to one-fourth of a grain, every three or four hours; but the most manageable preparation in this case is antimonial wine, (which is emetic tartar dissolved in white wine,) the dose being from half a drachm to a drachm, taken in a little warm slop, every four hours. If four drops of laudanum be added to each dose of antimonial wine, it increases the diaphoretic effect, and perspiration is more certainly and speedily produced.

In the quantity of one-tenth of a grain, it will likewise operate as an expectorant, when combined with squill, gum ammoniac, and camphor. In the same minute doses, united with calomel, it is a powerful alterative in many *cutaneous eruptions*, *internal obstructions*, and other severe *chronic maladies*.

It has lately been found a valuable remedy in *acute inflammations*, especially inflammation of the lungs, or other parts within the chest, and so suitable and efficacious a medicine does it often prove in these cases, that it should scarcely ever be neglected, and will sometimes be found a more powerful remedy in subduing the inflammation than blood-letting, or any other means usually resorted to in such maladies, except calomel and opium. The Italian physicians often trust to it alone for the cure of pleurisy and inflammation of the lungs, and give it in doses of a quarter or half a grain, dissolved in water, and repeated every second or third hour. In *croup* it is a medicine of incomparable power, as I have remarked under that head.

Being one of the most powerful medicines in exciting the action of the skin, it is found of great service in many cases of *indigestion* and *bilious complaints*, when the skin is dry or harsh, and the tendency to feverish attacks considerable. If, in such cases, this state is associated with a determination of blood to the head, it often proves of signal advantage; and it has nearly an equally good effect in severe nervous agitation arising in protracted cases of indigestion, not depending on any local

irritation, the seat of which the patient can point out, but on the state induced by long continued irritation of the brain. In these instances of nervous agitation, about the seventh part of a grain of emetic tartar is the proper dose, combined with twenty or thirty drops of tincture of henbane, and an ounce and a half of rose water, which may be repeated thrice a day; but in the preceding affections, from the tenth to the eighth part of a grain is a sufficient dose.

In all these chronic disorders, it will require to be continued for a considerable time, in order to insure all the effect it is capable of producing.

One or two drachms of emetic tartar rubbed in a mortar with an ounce of hog's lard, forms an ointment which, when rubbed on the skin, occasions a pustular eruption, that has proved very serviceable in pulmonary consumption, severe cough, hooping cough, white swellings, obstinate chronic pains, and other diseases in which external irritation, and a discharge from the neighbouring skin, are likely to be beneficial. The attention of medical men was first excited to the value of this external application, by the recommendation of the celebrated Dr. Jenner.

Norris's Drops are a solution of emetic tartar in spirit of wine, and disguised by the addition of some vegetable colouring matter. As a remedy in colds and fever, they are in no degree superior to well made antimonial wine.

When taken in large doses, emetic tartar acts as a corrosive poison, producing violent vomiting, hiccough, pain in the stomach, fainting, difficult respiration, convulsions, and death. The treatment consists in evacuating the poison by bland, oily liquids freely taken; after which, decoction of yellow Peruvian bark should be immediately administered, with opium.

EPSOM SALT.

This salt is a valuable purgative and diuretic, and in general use among medical men for these purposes on all common occasions. It operates readily, without griping; and notwithstanding its nauseous taste, is generally retained by the stomach when almost all other things are rejected, especially when it is administered in small repeated doses of a drachm, largely diluted with half a pint of water, or united with half the quantity of acidulated infusion of roses. In these forms it is a useful purgative in some cases of *low spirits*, *costiveness* with internal obstruction, *Devonshire colic*, and in all acute diseases. Its mildness and efficiency of operation is always increased by the addition of an equal quantity of Glauber's salt, when of

course half the usual quantity of Epsom salt is sufficient; and should the state of the stomach, or the general weakness, require its coldness to be obviated, it may be taken dissolved in lukewarm water, and with the addition of two drachms of tincture of senna. Thus combined, it is often of great service in bilious and liver complaints; indeed, half a drachm or a drachm of each of these salts dissolved in a pint of lukewarm water, and taken every morning, or every second morning, before breakfast, is nearly as efficacious in these and other disorders, as the celebrated waters of Cheltenham and Leamington.

By moderate exercise in the open air, while taking this salt, the purgative effect is diminished, and its diuretic property increased. It is invariably more pleasant and certain in its operation when largely diluted with water.

The dose is from a drachm to an ounce, or two, dissolved in compound infusion of orange-peel or cloves, or any other convenient fluid vehicle. About five or six drops of diluted sulphuric acid added to each dose renders it less nauseous, and sometimes more efficacious. When it is taken to overcome some internal obstruction or disease, it is, in general, best to take it in doses of a drachm or two in three-fourths of a pint of water, which may be repeated every morning, in the same way that the Cheltenham waters are administered. Combined with infusion and tincture of senna, it forms the common black purging draught so much in use on ordinary occasions.

ERGOT OF RYE.

Spurred rye, commonly called by professional men ergot of rye, is a diseased production which grows on the ear of rye, barley, and wheat, but most frequently on that of rye. The diseased grain varies much in length, sometimes being perfectly concealed within its husk, at others growing to near an inch and a half; its usual length is about an inch, and its general appearance resembles much the *spur* of the cock.

This substance has been known to possess deleterious and poisonous qualities for more than seven hundred years. If taken in considerable quantity, mixed with the healthy grain, as food, it produces giddiness, spasms, and convulsions, on which gangrene and sloughing of the lower limbs supervene. From this cause, an epidemic raged in the Kingdom of Hesse in 1596, and in both Saxony and Sweden in 1648—1649, and twenty years after in Blois and Montarges, in France. In 1777, a similar epidemic from the same cause ravaged Cologne, and its neighbourhood, and since that time, in different years, its baneful influence has been more or less remarked in France.

Some persons thought the deaths might be owing to great vicissitudes in the weather and temperature, but the various experiments of a M. Tessier, on animals removed out of the influence of such exciting causes, fully prove the accidents were attributable to the grain itself.

This substance has, nevertheless, been employed on the Continent by female midwives, as a promoter of labour pains, for 150 years; and it first attracted the attention of professional men, in consequence of a brief letter of Parmentier to the Editor of the *Journal de Physique*, in 1774, wherein he made known that it was frequently used by Madame Depille, a midwife at Chamont, as a child-bed remedy. Its great influence over the uterine system is undoubted, and it now enjoys the utmost confidence among French, English, and American practitioners. Indeed its action on the womb is specific, and it is almost the only medicine now employed as an excitant of the womb, that is, to rouse the energies of that organ in cases of lingering labour, dependant on its inefficient action.

It is likewise useful in some cases of *leucorrhœa*, or whites, probably in those instances in which the complaint is owing chiefly to a relaxed and disordered condition of the internal surface of the *uterus*. I do not, however, consider it by any means commonly necessary in this complaint—the most powerful remedy here is, in my opinion, the cantharides in large doses. See my *Treatise on the Diseases of Females*.

Thus we see that the Divine Author of all good brings good out of evil, and causes that to be of the most essential service to mankind, when skilfully employed as a remedy, which is even poisonous in large quantities, and under improper management. The dose of the *ergot of rye* in powder, (which is of a perfect ash colour,) is from five to twenty or twenty-five grains. The ordinary dose is fifteen grains, which may be repeated in a quarter of an hour, if the uterine action has not become apparent. It may be given in infusion—two drachms of the ergot may be infused in six ounces of boiling water for twenty minutes, and then strained; of which the proper dose is two or three table spoonfuls. Of course it should never be used but in cases of decided inefficient action of the womb, in lingering labours, and where there is no rigidity of the parts, nor malposition of the head; and it is rarely admissible in first children.

The cases in which this valuable medicine is useful are well pointed out in the following example, related by Dr. Beatty, in *Dublin Medical Journal*, *No.* xii. (1834.)

Mrs. K——, aged thirty-five, pregnant of her fourth child, fell in labour. The pains were slight, the membranes gave way, and the waters

tage in domestic practice, and being very cheap, and always readily to be procured, I have much pleasure in strongly recommending it to the attention of the public. This solution, when kept constantly applied to the part, is, in some instances, equal to the cure of very large or hard swellings.

To act as a tonic, the dose of salt may be from twelve to forty grains, two or three times a day.

COMPOUND COLOCYNTH PILL.

This pill is a combination of socotorine aloes, scammony, colocynth pulp, sulphate of potash, and oil of cloves, and is one of the most valuable aperients in cases of habitual costiveness, *head-ache*, *sickness at the stomach*, and other disorders depending upon a deranged and confined state of the bowels. It acts mildly and effectually in doses of three, four, or five grains, taken every night, or every second night; and is still more valuable when united with equal quantities of the compound rhubarb pill, or with a little calomel and James's powder.

COMPOUND POWDER OF IPECACUANHA.

This medicine is popularly known by the name of *Dover's powder*. It is frequently referred to in that part of this work which describes the proper treatment of diseases, for it is invaluable in its effects as a remedy to allay pain, determine to the surface of the body, and alter the diseased action of the vessels, in many obstinate complaints. From such operation, it is often of the greatest service in *chronic rheumatism*, and all complaints originating in, or connected with, suppressed perspiration, in *old coughs* and *spasmodic asthma*, and in *dysentery* and *looseness*. In small doses of three or four grains, it operates mildly, safely, and for the most part insensibly; but in doses of eight and ten grains, it acts as a powerful sudorific, occasioning profuse perspiration. Where opium is indicated to relieve pain, or procure sleep, it may often be used with still greater advantage than either laudanum or solid opium, since it does not affect the head, or produce such uncomfortable feelings as are frequently the consequence the day after using those medicines. When given in chronic rheumatism, flying anomalous pains, dysentery, or looseness, &c. the best way of administering it is in doses of three grains, three or four times a day, made into a pill with a little conserve of hips; but if the object is to excite a speedy and profuse perspiration, ten grains is the proper dose.

COMPOUND POWDER OF JALAP

Is milder in its operation than simple jalap powder. It is very serviceable as a purgative, and is useful to children with tumid bellies, in worm cases, and in dropsy. The dose is from one to two scruples for adults, and about half that dose for children.

COMPOUND RHUBARB PILL

Is composed of rhubarb powder, socotorine aloes, myrrh, and oil of peppermint. It is a warm, stomachic, laxative pill, very useful for obviating costiveness, and at the same time giving tone to the bowels in *indigestion*, *gout*, and *hypochondriasis* or low spirits. The dose is eight or ten grains, formed into two pills, and taken once or twice a day. Those who have very weak bowels, and find a difficulty in procuring any aperient medicine sufficiently mild, will find this pill of great value.

COMPOUND SQUILL PILL.

This pill is diuretic and expectorant, and is given with much benefit in *old coughs*, *difficulty of breathing*, and *asthma*. It is likewise useful in *dropsy*, in which case, its efficacy is almost always increased by being combined with a little calomel. The dose is from five to ten grains, repeated thrice a day.

COMPOUND TINCTURE OF BENJAMIN.

This medicine was formerly called Friar's Balsam, and was much used as a stimulating expectorant in *old coughs*, *asthma*, and *shortness of breath*, and as an healing application to *recent wounds* and *indolent ulcers*. It is, however, an improper dressing for recent wounds, because of its stimulating qualities, and of the separation of the resinous ingredients which takes place on its intermixture with the blood: but it is often efficacious in the case of indolent ulcers, and in chronic coughs, and asthma. In the latter cases, its warm balsamic properties render it very grateful and useful to the stomachs of the weakly and aged; and it is not so much employed by medical men as it deserves. The dose is from thirty drops to a drachm, twice or thrice a day, on a lump of sugar, or in mucilage.

COWHAGE.

This medicine is sometimes very efficacious in the expulsion of *worms*, particularly the *round worm*. The best mode of pre-

the strength should be recruited by generous food, steel, and cordial tonics.

The deleterious effects of an over-dose are best counteracted by laudanum in brandy and water, and by the application of a blister to the pit of the stomach.

GAMBOGE.

Gamboge is a powerful and active cathartic, and frequently excites vomiting, even in moderate doses. It is sometimes useful in obstinate *costiveness* and *dropsy*, especially in the latter complaint. When given in dropsy, it should be combined with squill and cream of tartar. Used as an occasional medicine for the removal of costiveness, and at the same time to promote a free discharge of urine, the best form is the compound gamboge pill of the shops, the dose of which is from ten to fifteen grains at bed-time.

GINGER.

The ginger plant is a native of the East Indies, and is particularly abundant in the mountainous district of *Gingi*, to the east of Pondicherry, whence it derives its name. It is now naturalized to the West Indies.

It is stimulant and carminative, and is useful in *flatulent colic*, and *indigestion*, and in *gout* when it attacks the stomach. Though it has a hot biting taste, it rarely heats the body, though taken to a considerable extent. It is less frequently used alone than as an adjunct to other remedies, to promote their efficacy, and give them warmth. The dose of the powder is from ten to fifteen grains. The tincture of ginger, taken in doses of from one to two tea-spoonfuls in warm water, and sweetened with sugar, is often a very useful medicine in weakness of the stomach, to afford relief from a sense of oppression or pain after eating.

GLAUBER'S SALT.

This is a *sulphate of soda*, and is a very common and useful purgative, whose virtues are the same as those of the Epsom Salt. It is given in doses of from one to eight or ten drachms, in the same way as the Epsom salt; but a combination of these salts, in equal proportions, is, as I have before remarked, more certain and pleasant in operation, than either of them used singly.

It is called Glauber's Salt from Glauber, a German chemist,

who first prepared it, and who named it *sal mirabile*. The *tartarized soda* was formerly called *sal polychrest*, or salt of many virtues, and these names are not unappropriate, so very efficacious are the milder purgatives often found in many complaints.

GUAIACUM.

The guaiacum tree is a native of Jamaica, Hispaniola, and the warmer parts of America. Both the wood and the gum guaiacum are stimulant, diaphoretic, and alterative, and these qualities render them of great service in *chronic rheumatism*, *gout*, *cutaneous eruptions*, and *scrophulous affections* of the membranes and ligaments. Its power of curing chronic rheumatism is well known even to the common people. When the gum is united with antimony or calomel, it very much increases their alterative powers; indeed, a combination of this gum with emetic tartar and calomel, forms one of the most powerful alterative medicines we possess. See *prescriptions*, *No.* 98.

The guaiacum wood forms a principal ingredient in the decoction of the woods, which is often a very useful medicine in cutaneous eruptions, rheumatism, and secondary symptoms of syphilis.

The Chelsea Pensioner, a nostrum by which Lord Amherst was cured of rheumatism, is composed of guaiacum, one drachm; rhubarb in powder, two drachms; cream of tartar, an ounce; flowers of sulphur, two ounces; one nutmeg finely powdered; which are to be made into an electuary with one pound of clarified honey. Two large spoonfuls to be taken night and morning.

The dose of gum guaiacum is from ten grains to half a drachm made into pills, or a bolus, with a little conserve of roses, and taken every night, or night and morning. But the *ammoniated tincture of guaiacum* is preferable for general use, of which the dose is from thirty drops to two drachms, or more, repeated three times a day. It must not be mixed with water, as that decomposes it, but should be taken either on lump sugar, or rubbed with any viscid solution, as thin mucilage of gum arabic or tragacanth. This tincture is sometimes very useful in a stoppage of the menstrual discharge, and is frequently of superior efficacy in other female complaints, particularly *dysmenorrhœa*, or painful menstruation. In the author's book *On the Diseases of Females*, a case is related, under Painful Menstruation, of a lady who had been married nineteen years without issue, but who was cured of a female obstruction by the guaiacum, and a few months after was delivered of a fine girl. She took twenty-four ounces of the tincture.

GUM AMMONIAC.

Ammoniac is a stimulating expectorant, and is sometimes useful in obstructions in the bowels. It is prescribed with advantage in *asthma* and *chronic cough*, but is seldom used alone, being, for the most part, combined with emetic tartar, squill, and ipecacuanha, when given for the relief and cure of these diseases. It forms a valuable ingredient in the compound squill pill of the shops. On account of its stimulating properties, its use must be avoided where any inflammatory action of the chest is going on. Dr. Paris says, that after the exhibition of smart purgatives, in combination with rhubarb, it proves valuable in mesenteric affections, by correcting the viscid secretion of the intestines. Dr. A. T. Thompson observes, that the same combination of ammoniac and rhubarb is singularly efficacious in that peculiar state of the bowels often accompanying hypochondriasis and indigestion, in which there is an almost constant degree of colic, particularly after taking food, and which appears to arise from a viscid mucus lodged in the intestines.

Externally, it is applied under the form of a plaster to reduce the size of indurated tumours, and white swellings of the joints. The plaster of ammoniac and mercury is often very valuable for this purpose.

The dose of ammoniac is from ten to twenty grains.

GUM ARABIC.

The tree which yields this article is found in almost every part of Africa. This gum is a simple demulcent, serving to lubricate abraded surfaces, and involve acrid matters in the stomach and bowels. It is chiefly used in the state of mucilage, but is sometimes taken in the solid form, to sheath the fauces, and allay the tickling irritation which occasions the cough in catarrh and pulmonary consumption; in which cases, a piece of it is allowed to dissolve slowly in the mouth.

The mucilage of gum arabic is made by dissolving four ounces of gum arabic in powder, in half a pint of boiling water. This in the dose of half an ounce or an ounce, is a useful demulcent in looseness, dysentery, gravel, and scalding of urine, or as a vehicle for opium, and other medicines in these complaints.

Gum water, made by pouring a pint of boiling water on two or three ounces of gum arabic, is a very useful and agreeable diluent in many disorders, both acute and chronic. Thus in fever, in cough, consumption, stomach and other chronic com-

plaints, it cools the mouth, and sheaths the throat and alimentary canal, and likewise affords some support.

HARTSHORN SHAVINGS.

These shavings are nourishing, and when dissolved in boiling water, and united with orange juice and sugar, with or without a little wine, as circumstances may indicate, form a good article of diet for the sick and convalescent Four ounces of the shavings, boiled in two pints of water, until one pint be dissipated, and the remainder strained, affords a clear transparent jelly.

HELLEBORE.

Black hellebore root is a powerful cathartic, and was formerly much celebrated for the cure of *insanity*, *dropsy*, and *worms*; but its curative powers are much doubted by medical men of the present day, and, therefore, it is rarely employed. It is, however, sometimes of service in suppression of the menstrual discharge in full plethoric habits, when preparations of iron are inadmissible. In such cases Dr. Mead thought highly of it. The tincture is the best form of administering it, which may be given in doses of from thirty drops to a drachm, two or three times a day, in any agreeable vehicle.

HONEY.

This well known substance is laxative, and externally applied, detergent, and stimulant. It is seldom ordered alone as an internal medicine, but applied to sores and cracks in the skin it proves a cleansing and grateful application, which promotes their healing. When mixed with a little water, it forms the best wash which can be obtained for the skin when chapped and excoriated by cold. It is an excellent adjunct to gargles in sore throat and ulcerations of the mouth.

Honey of borax is made by mixing a drachm of sub-borate of soda with an ounce of clarified honey, and is a cooling application of excellent use in thrush, excoriations, and ulcerations of the mouth.

HEMLOCK.

Hemlock is a biennial, indigenous plant, growing under hedges, by road sides, and among rubbish, flowering in June, and July. It is distinguished from other umbelliferous plants

with which it may be confounded, by its *large and spotted stem*, the dark and *shining colour of its lower leaves*, and their *disagreeable smell*, when fresh and bruised, resembling in some degree the urine of a cat.

It is a powerful narcotic and sedative, and is used as such, both internally and externally. Its present extensive use among professional men is a sufficient proof of its efficacy. When the plant is gathered at the right time, and properly prepared, it is of much service in extensive *ulcerations*, whether of a *scrophulous*, *cancerous*, or *syphilitic* character, and in *glandular tumours:* it allays their irritability, alleviates the pain, and corrects and improves the discharge. Dr. Fothergill thought highly of its virtues in some forms of *scrophula*, and many practitioners have found it of great value in cancerous diseases. It is also of much advantage in the latter stage of *hooping cough*, and in *pulmonary consumption*. The extract of hemlock and henbane combined in equal proportions, and adapted, by means of mucilage and syrup, to the form of a mixture, affords an effectual palliative in coughs and pulmonary irritation, but the more agreeable and not less efficacious way, is to take this combination in pills.

Hemlock is of much service in many other cases, where pain, uneasiness, or irritation are present: for example, in palsy complicated with rheumatism, in which the deficiency of motion is attended with acute pain,—in chronic rheumatism, in female complaints, and in periodical head-aches. In the latter case, it may be advantageously united with quinine in some instances, and with arsenic in others.*

The recent leaves are applied externally, and often with great advantage, to painful or ill-conditioned ulcers, or a poultice for the same purpose may be formed from the dried powder mixed with crumbs of bread.

The powder of the dried leaves, and the extract, are the forms in which it is given. The powder ought to have a fine lively green colour, without which it is useless; the dose is three grains, twice or thrice a day, gradually increased to five or eight grains. The extract *prepared in vacuo* is that only which can be depended upon: it may be given in doses of from three to twenty grains, twice or thrice a day. The extract of hemlock prepared by Mr. Allen, of Plough Court, and at Apothecaries Hall, is worthy of every dependance.

An overdose of hemlock produces sickness, giddiness, great anxiety, stupor, and convulsions. The best antidote is vinegar,

* It is thought by some to be an aphrodisiac. Bergius, a foreign author of credit, says, "Impotentiam virilem sub usu conii curatam observavi."

after the stomach has been evacuated by an emetic of twenty grains of sulphate of zinc, and the excitement in the brain reduced by bleeding and purging.

HENBANE.

Henbane, (in technical language *hyosciamus*,) is well known to be an indigenous plant, growing on waste grounds, and at the sides of roads.

It possesses a very considerable narcotic and anodyne † power, and in large doses is poisonous. In medicine, it is chiefly employed as a substitute for opium, to alleviate pain or procure sleep, in cases where the latter disagrees with the constitution, or it is desirable to avoid its constipating effects. It is also particularly indicated in complaints which call for the constant use of some anodyne for a considerable time, as, when properly managed, it produces its anodyne effects without distressing the general system. Like hemlock, it favours the natural action of the bowels. It is thought to be peculiarly adapted for insanity occurring in child-bed; and is much employed in red gravel and stone, to allay pain and irritation.

It is generally considered by the profession to be a more effectual narcotic than hemlock, and is, therefore, more commonly employed; but in my opinion it does not possess so much of an alterative quality as the latter, that is, it does not afford us so much assistance in our endeavours to alter the condition of diseased parts, and, consequently, is not so suitable and valuable a remedy where we wish, at the same time, to alleviate pain, induce sleep, and remove disease. Hence we find hemlock to be the better medicine in cancerous and scrophulous swellings and ulcerations, and in many other indurations and ulcers attended with pain.

Henbane is administered either in the form of extract or tincture. The dose of the extract is from four to twenty grains made into pills, with a little tragacanth or gum arabic powder, and repeated twice or thrice in the twenty-four hours, if necessary. The dose of the tincture is from half a drachm to one or two drachms. Dr. A. T. Thomson says, *Elements of Materia Medica, vol.* i. *p.* 584, "In my own practice, I have seen more good derived (in mania) from eight or ten grains, combined with ten grains of camphor, and given at bed-time, than from the repetition of smaller doses."

Alkalies and lime water are inadmissible in combination with henbane, since they destroy its narcotic power.

† Anodynes are medicines which relieve pain.

The means of counteracting the injurious effects of an excessive dose, are the same as are pointed out above, in the case of taking too large a quantity of hemlock.

HIERA PICRA.

This is a well-known domestic remedy, chiefly used in female obstructions, and is prepared by mixing together a pound of hepatic aloës, and three ounces of white canella bark. These are to be rubbed separately into powders before they are mixed together. It is usually taken in wine or spirits, and the dose is from ten to twenty grains; but it is taken in pills, mixed together with a little oil of cloves and castile soap.

The canella bark is a valuable aromatic, and it both covers the taste, and modifies the operation of the aloës, lessening its tendency to griping.

Hiera picra is undoubtedly useful in some cases of female obstruction, and likewise in that form of bleeding from the womb which is liable to occur on the final cessation of the menses; and its success proves the importance of gentle purging in these complaints. A striking and successful case of this kind of hæmorrhage may be seen in the author's *Treatise on Female Diseases*, under the head of *Final Cessation:* The lady was forty-two years of age, and almost all the known remedies for hæmorrhage had been prescribed without effect;—the *hiera picra* cured her speedily.

HOFFMAN'S ANODYNE LIQUOR.

This is the compound spirit of sulphuric ether of the shops, and is stimulant, narcotic, and antispasmodic. It is used for the same purposes as the common sulphuric ether, and is sometimes useful in allaying irritability and disposing to sleep, in the latter stages of typhus, and other malignant fevers. It is less exciting than simple ether. When united to opium for the purpose of procuring sleep, it renders the operation of the opiate more pleasant, and counteracts its deleterious properties. The dose is from half a drachm to a drachm, in any simple fluid vehicle.

All ethers should be kept in closely stopped phials.

JALAP.

The jalap root comes from South America, and is said to take its name from Xalappa, a city of Mexico. It is a stimulant cathartic, acting briskly on the bowels, especially the

larger bowels, and although occasionally griping severely, yet safe and efficacious. It is a good purgative in the torpid state of the intestines in *low spirits*, *melancholy*, and other forms of *insanity;* in *worm cases*, and the slimy state of the bowels to which children are subject; and to carry off the water by stool in *dropsy*. In worms and insanity it should be combined with calomel, and in dropsy with cream of tartar, as these additions quicken its operation, and render it more effectual. A drop or two of some essential oil, as the oil of carraway or anniseed, should be added to each dose of jalap, to prevent griping. The watery extract purges moderately without griping, and is therefore well adapted for children.

The dose is from ten grains to half a drachm, given in the form of powder, pills, or bolus.

JAMES'S POWDER.

This celebrated and valuable medicine is a *nostrum*, the original proprietor of which was Dr. James, a respectable physician in London, from whose prescription it is still prepared by Messrs. Newberry, of St. Paul's Church Yard. It operates as a diaphoretic, and alterative, and is often of excellent use in *colds*, *coughs*, the commencement of *fevers*, and all *inflammatory actions*, as it changes in a very gentle and frequently insensible manner, the diseased condition of action in the minute vessels of the circulating system, and thus conducts the existing malady to a favorable termination. If it be administered early, after the stomach and bowels have been previously evacuated by purgatives and an emetic, fevers of the most threatening aspect are often cut short by it. Its good effects are almost always increased by the addition of a small quantity of calomel, such as half a grain, or a grain, to each dose. Thus combined, it is advantageously given in acute rheumatism, measles, small pox, colds, and recent coughs; and in obstinate eruptions of the skin it should be united with guaiacum as well as calomel. A grain and a half of James's Powder, a grain of calomel, and two grains of gum guaiacum in powder, made into a pill, and given every night, forms one of the most efficient alteratives we possess, and is of the greatest service in almost all chronic diseases. In fever, inflammation, and other acute complaints, it must be given in larger doses, more frequently repeated, as three, four, or five grains, with half a grain of calomel, every four or five hours; and its operation is assisted by the patient's drinking freely of some warm diluting fluid during the day.

As it is insoluble in water, the best manner of taking it is made into pills with conserve of hips. *Newberry's James's Powder* is always to be preferred.

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Hemlock is of much service in many other cases, where pain, uneasiness, or irritation are present: for example, in palsy complicated with rheumatism, in which the deficiency of motion is attended with acute pain,—in chronic rheumatism, in female complaints, and in periodical head-aches. In the latter case, it may be advantageously united with quinine in some instances, and with arsenic in others.*

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Henbane, (in technical language *hyosciamus*,) is well known to be an indigenous plant, growing on waste grounds, and at the sides of roads.

It possesses a very considerable narcotic and anodyne † power, and in large doses is poisonous. In medicine, it is chiefly employed as a substitute for opium, to alleviate pain or procure sleep, in cases where the latter disagrees with the constitution, or it is desirable to avoid its constipating effects. It is also particularly indicated in complaints which call for the constant use of some anodyne for a considerable time, as, when properly managed, it produces its anodyne effects without distressing the general system. Like hemlock, it favours the natural action of the bowels. It is thought to be peculiarly adapted for insanity occurring in child-bed; and is much employed in red gravel and stone, to allay pain and irritation.

It is generally considered by the profession to be a more effectual narcotic than hemlock, and is, therefore, more commonly employed; but in my opinion it does not possess so much of an alterative quality as the latter, that is, it does not afford us so much assistance in our endeavours to alter the condition of diseased parts, and, consequently, is not so suitable and valuable a remedy where we wish, at the same time, to alleviate pain, induce sleep, and remove disease. Hence we find hemlock to be the better medicine in cancerous and scrophulous swellings and ulcerations, and in many other indurations and ulcers attended with pain.

Henbane is administered either in the form of extract or tincture. The dose of the extract is from four to twenty grains made into pills, with a little tragacanth or gum arabic powder, and repeated twice or thrice in the twenty-four hours, if necessary. The dose of the tincture is from half a drachm to one or two drachms. Dr. A. T. Thomson says, *Elements of Materia Medica, vol.* i. *p.* 584, "In my own practice, I have seen more good derived (in mania) from eight or ten grains, combined with ten grains of camphor, and given at bed-time, than from the repetition of smaller doses."

Alkalies and lime water are inadmissible in combination with henbane, since they destroy its narcotic power.

† Anodynes are medicines which relieve pain.

the statements of an author who asserts, as he does, that it does not emaciate, must be received with caution. His form for taking it is—one grain and a quarter of iodine, and two grains and a half of hydriodate of potash, which are to be dissolved in eight ounces of water; of which one table-spoonful is to be taken three or four times a day, in a little barley or simple water. See *Lugol on the Use of Iodine in Scrophula.*

IPECACUANHA ROOT.

This plant comes from Bahia, Rio Janeiro, and other provinces of the Brazils. There are three varieties of the root, the brown, the grey, and the white, of which the first is by far the best.

Ipecacuanha, when administered in large doses of ten or fifteen grains, is emetic; in smaller ones of two or three grains, diaphoretic and expectorant; and in still smaller doses it acts as a stomachic, stimulating and giving energy to the digestive organs. As an emetic it is mild, safe, and certain in its operation; it evacuates completely the contents of the stomach, and does not so much weaken it as antimonial emetics. It is the emetic best adapted for children. It is an established fact, that an emetic given at the commencement of continued fevers, will sometimes cut short their progress, or if it fail in accomplishing this object, will give to the subsequent symptoms a milder aspect, and with this view, fifteen or twenty grains of ipecacuanha powder may be used with great advantage. In doses of two or three grains repeated every three or four hours, till it operates by vomiting, sweating, or purging, it is found of eminent utility in dysentery and chronic looseness; indeed, its effects in these severe complaints are often invaluable, and it is, perhaps, the most beneficial aperient in dysentery; for when we can bring it to act in this way, it produces a steady determination of the peristaltic motion of the bowels downwards, at the same time that it strengthens their internal surface, and relaxes the skin. Helvetius first made known its use in *dysentery*, and was rewarded by Louis XIV. with 1000*l.* sterling for the discovery. In the same doses it is of excellent use in *spitting of blood*, *hooping cough*, *difficulty of breathing*, and *spasmodic asthma*. In spitting of blood it is particularly worthy of confidence, both to stop its progress, and prevent its return.

In still smaller quantities of a grain, or half a grain, three or four times a day, it strengthens the digestive organs, and is very beneficially employed as a remedy for indigestion, bilious and liver complaints. In such cases it may either be used alone made into pills with a little hard soap, or be combined with steel, or any bitter extract.

When combined with opium, it forms the compound ipecacuanha powder, and proves a valuable anodyne, sudorific, and alterative, of great service in acute and chronic rheumatism, and in other complaints in which we wish to relieve pain, procure sleep, and at the same time relax the skin.

IRON.

Preparations of iron, or steel as they are sometimes called, are of all metals the most salutary to the animal system, from being the only metal having any sensible activity which has no poisonous quality. When given medicinally, the effects obtained from it are those of a tonic; it increases the vigour of the circulation, causes the blood to assume a more florid hue, promotes digestion, excites the secretions, or restrains them when they have been morbidly increased from debility, and by its astringency, checks profuse evacuations, and counteracts the tendency to hæmorrhage. The diseases in which it is used are those which are dependent on, or attended with, a weak, languid habit of body, as *green-sickness*, *indigestion*, and its consequences, *hysterics*, *whites*, *palsy*, *scrophula*, *rickets*, and *consumption*. It is also extremely beneficial in *cancerous ulceration*, and other ill-conditioned sores. The use of iron is improper when there is a considerable tendency to inflammatory action, or any particular fulness of the vessels. In these states of the system it occasions heat, thirst, head-ache, laborious breathing, and many other unpleasant symptoms, when its administration ought to be suspended. But when given in a proper state of the body, few medicines are capable of producing more beneficial effects, as I have repeatedly proved in my practice.

Numerous preparations of this metal are medicinally employed, the chief of which are the subcarbonate of iron, the sulphate, and tartarized iron.

The *Subcarbonate of Iron* is one of the most valuable of its preparations, and that which is in common use. It is tonic, and is a useful remedy in indigestion, head-ache, scrophula, green-sickness, worms, and in all cases in which preparations of iron are indicated. Mr. Carmichael, of Dublin, has also used it as a remedy in cancerous ulceration, both internally administered in large doses, and externally applied sprinkled on the sore. Cases have been given in which this practice has proved successful, and there can be no doubt of its value in such diseases, for it relieves pain, promotes a healthy discharge, and strengthens the general habit. The dose is from five to twenty grains, repeated twice or thrice a day, made into pills,

with a little mucilage of gum arabic, or extract of gentian. A small quantity of aromatic powder causes it to sit easier on the stomach.

The *Sulphate of Iron* is one of the most active preparations of the metal, and may be advantageously employed in all the complaints above enumerated. The dose is from one to five grains, combined with extract of gentian, and a little aloes.

Tartarized Iron possesses the same medicinal powers as the other preparations of iron; but from its mildness, slight taste, and ready solubility, it is a more convenient form for the administration of iron to children, and in many cases in which the other saline preparations of it prove nauseating, and sit uneasy on the stomach. It has been extolled as a remedy in dropsy, in which it is supposed to exert both a diuretic and a tonic power. The dose is from ten grains to half a drachm, given in the form of powder or bolus, combined with four or five grains of aromatic powder. It may be repeated twice or thrice a day.

JUNIPER BERRIES.

The common juniper is indigenous, growing on heaths and chalky hills, and flowering in May. But the greater quantity of juniper berries which are used in Britain, are brought from Germany, Holland, and Italy.

They are diuretic and cordial. They have been long known as a remedy in *dropsy*, but cannot be depended on alone, although they form an excellent adjunct to foxglove and squill. The tops are also used, and as the virtues of the berries depend on the essential oil, which is found in the woody part also of the plant, they must be equally efficacious. They have been recommended in scorbutic and cutaneous affections. The best form of using the berries is that of infusion, made by pouring a pint of boiling water on three ounces of the berries bruised, of which the dose is a tea-cupful every four hours. The proper dose of the oil of juniper is from three to twelve drops, combined with water by means of sugar or mucilage.

KINO.

Kino is a powerful astringent. Like catechu, it is employed in obstinate *chronic looseness*, *whites*, and *internal hæmorrhages;* but it is thought to be less certain in its effects than catechu, and is, therefore, less used. Dr. Pemberton, however, thought very highly of it, and was much in the habit of employing it. The alkalies, solutions of isinglass, and strong acids, are incompatible in prescriptions with kino.

The dose in substance is from ten grains to half a drachm, and of the tincture from one to two drachms.

LACTUCARIUM, OR JUICE OF LETTUCE.

The soporific properties of the garden lettuce were known in the earliest ages. Galen used to eat the lettuce in the evening, as a remedy for wakefulness at night; and most persons experience it to induce sleep.

Lactucarium is the inspissated juice of the garden lettuce, and has the colour, and, in some measure, the taste and odour of opium; but no morphia has yet been obtained from it, and its narcotic principle is, therefore, still undiscovered. Its analysis is said to prove it to contain a large proportion of caoutchouc, (or indian rubber), as much as twenty-two parts in fifty.

Its medicinal effects are very nearly the same as those of opium, but it is undoubtedly much milder in its operation, and may consequently be used in *cough* and *consumption*, and in other cases where opium, from its stimulating effects, cannot be borne. Lactucarium may be advantageously taken by persons who cannot take opium in any shape. Dr. Duncan, Sen. of Edinburgh, first suggested its use in his *Observations on Pulmonary Consumption, Appendix, p.* 162. The dose is from one to six grains, or more, in the form of pill.

LAUDANUM.

What is generally termed laudanum is the tincture of opium of the shops, which is made by pouring two pints of proof spirit of wine on two ounces and a half of powdered opium. These articles are allowed to digest for a week or two, and then strained, when they are fit for use. Nineteen minims, or about thirty-five drops, of laudanum contain one grain of solid opium.

This tincture is used in all cases in which opium is indicated, and is a very convenient and elegant form of giving the remedy. In general it operates more speedily than the solid opium. The usual dose is from twenty drops to a drachm; but in case of violent and continued pain, and in some particular diseases, very large doses can be borne, and are even necessary. It is not, however, so eligible a remedy for general purposes as the "Black Drop," or "Battley's Solution," since both these preparations are more powerfully anodyne than laudanum, and do not affect the head or confine the bowels.

It is worthy of notice, that the vehicle in which laudanum is exhibited is often of much consequence, from its effect on the

stomach; thus if given in some agreeable aromatic water, or in a cordial draught, (see No. 79), or, in other cases, in a little brandy and water, it may be rendered both less irritating to the system, and more useful to the patient, than when merely taken in water.

As an external application, this tincture rubbed on the skin produces its usual anodyne effects in a smaller degree, allaying pain, and relaxing spasm.—Under the head of OPIUM I have considered the various uses of laudanum, and its modification by combination, age, sex, &c.

LAVENDER DROPS.

These are the compound spirit of lavender of the shops, and are composed of the simple spirit of lavender, spirit of rosemary, cinnamon bark bruised, nutmegs bruised, and red saunders-wood. They are an elegant and grateful cordial and stimulant, useful in *languors* and *faintings*. But it should be recollected, that they are merely a palliative, and their use should not be allowed to supersede that of tonics, and other medicines capable of acting beneficially and permanently on the cause of these symptoms. It is a useful adjunct to stomachic infusions, as infusion of gentian, cascarilla, &c.

The dose is from thirty drops to two tea-spoonfuls, in any agreeable vehicle.

LEECHES.

As these little animals are very serviceable, and frequently used in domestic practice, it is necessary that I should say a little about applying and cleaning them, &c. They are at times applied in all cases where local blood-letting is necessary, and particularly to places where cupping-glasses cannot be applied. In acute inflammation of vital organs, their use should never be neglected; for however important general bleeding is in these instances, the drawing of blood from the immediate vicinity of the inflamed part by means of leeches is of great consequence.

It is sometimes exceedingly difficult to make them bite, which they never will do when they are sick. The best mode of applying them seems to be, to take them out of the water for some minutes before they are to be used, and to dry them well with a very soft cloth directly before they are applied. The part should also be well cleaned with soap and water, then washed with a little pure water, and made very dry. If there be any hairs on the spot, these must be close shaved. When they, nevertheless, will not readily fix, or where it is wished to apply them very exactly on one particular spot, putting them into a

large quill cut at both ends, and applying the end at which the head of the animal lies to the part, with the finger on the other end, is an excellent mode of making them bite. The quill is withdrawn after they are firmly fixed. Another excellent mode of making them fix directly on any particular spot, is said to be by touching the part with the bloody spongy point of a quill recently taken from a pigeon's wing. Putting them into some porter for a few minutes before applying them, is likewise a good way to make them bite. They drop off spontaneously, whenever they have gorged themselves with blood; and they may be separated at any time by sprinkling a little salt on the head. Very few leeches can draw more than half a fluid ounce of blood; and therefore it is necessary, in order to increase the quantity, to keep the orifices bleeding by bathing them with hot water. After leeches drop off, the application of a very little salt makes them disgorge all the blood they have sucked; and if they be immediately thrown into clean water, and this repeatedly changed for three or four times, they soon recover their health and vigour. Dr. Johnson, who has written a treatise on the economy of the medicinal leech, advises the use of vinegar instead of salt, which is not apt to blister the lips of the leech, as salt does, preventing it from sucking for some considerable time.

LENITIVE ELECTUARY.

Lenitive electuary is made in the following manner. Take of best senna leaves, in very fine powder, four ounces; pulp of prunes, a pound; pulp of cassia, a quarter of a pound; pulp of tamarinds, three ounces; treacle, or simple syrup, a pint and a half; essential oil of carraway, two drachms. Boil the pulps with the syrup, or treacle, to the thickness of honey; then add the senna, and, when the mixture is nearly cold, the oil of carraway; finally, mix the whole thoroughly together.

When properly prepared, this electuary is a mild and pleasant aperient, and may be used as such in all cases of costiveness. It is well adapted to regulate the bowels of children, pregnant women, and all delicate persons; and may be used either alone, or combined with a small portion of sulphur and cream of tartar. When united with an equal quantity of flowers of sulphur, it forms one of the best remedies for piles now known. Employed alone, the dose is from one to three teaspoonfuls taken at bed-time.

But it is very rarely properly prepared, the wholesale druggists too frequently employing rotten apples, jalap, and other cheap ingredients, instead of the articles ordered by the pharmacopœia. The electuary from Apothecaries' Hall is excellent.

LETTUCE JUICE.—*See* LACTUCARIUM.

LIME-WATER.

Lime-water is made by pouring six pints of boiling water upon a quarter of a pound of fresh burnt lime. They are to be agitated together, and the vessel covered directly and set apart for three hours; afterwards the solution is to be preserved upon the undissolved lime, in well stopped glass bottles, and the clear fluid poured off when it is wanted for use.

It is tonic, antacid, destroys worms, and is externally detergent. It proves very useful in *indigestion*, attended with much acidity on the stomach, in *chronic looseness*, *diabetes*, and *whites*. It destroys intestinal worms, and is serviceable in slimy bowels. Mixed with an equal quantity of milk, it furnishes an excellent remedy in the bowel complaints of children. Sometimes it is used with advantage in *red* gravel, and in stone.

Dr. Hutchinson, of Dublin, has strongly recommended an infusion of Peruvian bark in lime-water, as a very valuable tonic in *scrophula*, *rickets*, and *extreme general debility*. He asserts, that it has cured several desperate cases of debility which had been pronounced hopeless; and it appears to me to be a remedy worthy of great confidence. A pint of lime-water may be allowed to digest for four hours, upon half an ounce of Peruvian bark, coarsely powdered, then strained off and taken in doses of from half an ounce to an ounce three times a day.

Milk disguises the flavour of lime-water without impairing its virtues. The dose is from half an ounce to half a pint, once or twice a day.

LOBELIA INFLATA.

The *lobelia inflata*, or Indian tobacco, is a medicine which has been lately introduced into medical practice, especially for the relief and cure of spasmodic asthma, and spasmodic cough. It is a biennial plant, growing almost throughout the United States, and is much employed, I believe, in America. It is an emetic, and also possesses expectorant and sedative properties. It is with this plant as with the ordinary tobacco, some people can bear it well, while in other cases the smallest dose produces giddiness and vomiting. It should, therefore, be always commenced in small doses, as twenty or thirty drops of the tincture, and gradually increased, if it agrees.

It is praised for its efficacy in spasmodic asthma in *Bigelow's American Medical Botany*, a respectable work; and a case is

therein related of a physician, (Dr. Cutler), who suffered from asthma for ten years, and, during the paroxysm, resorted to many medicines for relief, without experiencing much benefit from any, until he took the tincture of *lobelia inflata*, which immediately relieved him, and subsequently improved his general health. It is undoubtedly sometimes of uncommon efficacy in this complaint, and if persons have tried other means without effect, I advise this medicine not to be disregarded; but I question whether it be in general superior or even equal to many other remedies for asthma, and would therefore guard my readers against being imposed upon by the strong, (which are indeed too often interested, and airy,) representations of some persons of the present day.

The tincture is the form in which it is used, which is made by digesting for a few hours, two ounces of the dried plant in a pint of diluted spirit of wine; of which a tea-spoonful is the ordinary dose, taken in water, and repeated thrice a day.

MAGNESIA.

Magnesia is antacid, and when acidity in the stomach prevails, purgative; but if no acid be present, it does not appear to increase the peristaltic motion of the bowels. It is a useful remedy in *acidity of the stomach* and bowels, particularly of children, and proves to them a suitable and efficient purgative, when combined with a little rhubarb powder. It is preferable to chalk and other absorbents in heart-burn, when the bowels are costive. In *red* gravel it is very useful, and when the concretions are formed in the kidney, no remedy is so efficacious. When gout and gravel are combined, and magnesia can be brought to act gently on the bowels, the symptoms of the former disease, as well as those of the latter, are often much relieved by it. There are two preparations of this article,—the calcined magnesia, and the carbonate. When much flatus exists in the stomach, the former is preferable. The dose of the calcined magnesia is from ten grains to half a drachm, taken in water or milk; of the carbonate of magnesia, from half a drachm to a drachm or more.

Henry's Magnesia appears to differ from the best calcined magnesia of the shops, only in being prepared so as to form a more impalpable powder, which causes it to act more pleasantly and effectually.

MANNA.

Manna is the produce of the flowering ash, a tree which is a native of the South of Europe, growing abundantly in Calabria, Apulia, Sicily, and on the loftier mountains of Greece.

It is a very gentle laxative, fit only for children, and persons of very weak habits. Indeed, even to such patients, it is not in general a useful medicine alone, and is advantageously combined with senna tea, or rhubarb. The dose for children is from one to four drachms.

MARSH-MALLOWS.

Both the marsh and common mallow are useful demulcents in cough, gravel, and stone, in which cases they are given in the form of decoction, a pint or two being drank in the course of the twenty-four hours. The roots and leaves, well boiled together, are sometimes used as an emollient poultice to promote suppuration, in other words, to bring any inflammatory swelling to what is vulgarly called a head, when that course is considered desirable.

Warm fomentations of the leaves and roots of the mallow, boiled in water, are of great service in many severe *contusions* and *wounds*, both in man and animals, in which cases, they have considerable effect in reducing the inflammation and swelling, and promoting the favorable termination of the injury. An animal most severely gored in the belly, soon recovered by fomenting the part very frequently with the above decoction.

MEADOW-SAFFRON.

This is an indigenous perennial plant, (the *Hermodactyllus* of the ancients), generally found growing in moist rich meadow grounds, and flowering in September. Its officinal name is *colchicum autumnale*, and it is well known to be poisonous to animals of all classes. That admirable principle of preservation, called *instinct*, implanted in animals by the All-wise and Beneficent Creator, leads them to avoid the foliage in the fields.

It operates chiefly on the *duodenum*, or first intestine; and its action is that of a purgative, diuretic, and sedative or narcotic. Hence it stimulates the excretory ducts of the liver and pancreas, and the mucous membrane of the intestines, producing copious bilious stools, and diminishing febrile action. It is sometimes of great service in *diseases of the heart*, *gout*, *rheumatism*, and *inflammatory complaints*, but, in order to its being of much permanent benefit in these maladies, it requires to be administered with caution and judgment, or otherwise it may prove detrimental, instead of being useful. In acute inflammation, it will frequently be a useful auxiliary to blood-letting and calomel, but ought not to be depended upon alone for the removal of the attack. In gout and rheumatism, its powers, when directed and regulated by a judicious hand, are often

highly valuable, since it allays the tormenting pain of those cruel disorders more speedily and effectually than any other remedy, and, in combination with other suitable medicines, tends very much to shorten the period of the disease. In such attacks, it should rarely be given alone, and never in large or frequent doses. See the prescription No. 80, and the article *Gout*. It operates on the bowels chiefly, and the nerves; and, when taken in excess, it enervates the digestive organs, and has an extraordinary effect of a depressing nature on the whole nervous system.

The dose, in substance, is from three to eight grains of the dried bulb. The wine *(see the Collection of Prescriptions)* is the best mode of administering it; but the tincture may also be given in the dose of from fifteen drops to a drachm, combined with a little magnesia and water.

MEZEREON BARK.

This is a stimulating diaphoretic and alterative, of considerable efficacy in *chronic rheumatism*, *cutaneous eruptions*, and some cases of *scrophula*. It is likewise a useful remedy for the secondary symptoms of syphilis, and forms an active ingredient in the celebrated decoction of sarsaparilla. Dr. Withering employed it successfully as a local stimulant, in a case of difficulty of swallowing, occasioned by palsy. See *Palsy*.

An ointment of the expressed juice of the bark is valuable for dressing issues—it is said to have advantages over the savine or any other ointment for this purpose.

It is generally given in the form of decoction, made by boiling two drachms of the bark of mezereon root, with half an ounce of liquorice root, in three pints of water, down to two pints; of which, the dose is from four to six ounces, three times a day.

MORPHIA.—*See* OPIUM.

MUSK.

Musk is obtained from an animal resembling the deer, inhabiting the Alpine Mountains of the East of Asia, particularly of the Himālā Mountains, which divide Thibet from India. It is a solitary animal, living among the rocks, and frequently the highest tops of the snowy peak; very timid, and difficult to be taken.

This article is stimulant and antispasmodic, possessing a remarkable power of resolving spasm, and increasing the energy

of the brain and nerves. Hence it is sometimes efficaciously given in *typhus fever*, when *low delirium*, twitching of the tendons, and hiccough supervene. It has also been praised for its virtues in arresting the progress of *gangrene*, when combined with ammonia. Dr. Cullen considered it one of the most powerful antispasmodics we are acquainted with, and many other eminent practitioners are of the same opinion; I think it much inferior to assafœtida. It is sometimes advantageously exhibited in spasmodic diseases, especially in *epilepsy*, *hysterics*, and *cholera morbus*. In large doses it is of great service when gout suddenly leaves the extremities, and fixes on the stomach, or some other vital organ. It is a very high priced article, and is with great difficulty obtained genuine.

It is given in substance, in the form of a bolus, of which the dose may be from eight grains to a drachm, repeated at intervals of three or six hours.

MUSTARD SEED.

Mustard seeds are slightly stimulant, diuretic, and aperient, and have been found useful in costiveness, indigestion, dropsy, and the torpid state of the bowels which accompanies palsy. They have become of late a very popular remedy for *indigestion*, *costiveness*, and some other complaints, and much has been deservedly said of their good effects. I was formerly inclined to look upon them as frequently objectionable, on account of their supposed stimulant properties, and that when they did agree their efficacy was not so great as was represented; but a closer attention to the subject has convinced me that they form a remedy of no mean power, more especially in costiveness, indigestion, and some anomalous affections of the general health. They act very mildly and yet effectually as an aperient, have but little stimulating power, and afford a voluminous stool of a proper consistence. It is very evident that they exert a considerable alterative effect on the constitution when persevered in, which seems to be owing to their containing sulphur, (a minute portion of that valuable alterative substance having been detected in their envelope,) and also to their regular laxative operation. For whatever substance acts regularly and mildly as an aperient, is at the same time alterative, a fact which demands attention. This depends no doubt on the marked influence which a regular healthy action of the bowels has on the whole system. In the above disorders, these seeds may be taken in doses of two or three tea-spoonfuls, or a table-spoonful, twice or thrice a day.

The powder of mustard seed, mixed with water, in doses of

three or four tea-spoonfuls, is emetic, and, as such, is used in paralytic cases, and will often operate quickly and fully when other emetics fail. Mustard poultices, made by mixing the flour with water, are powerfully stimulant when applied to the skin, and put on the soles of the feet, are often of much service in the delirium of typhus, and in comatose affections.

MINDERERUS'S SPIRIT.

This is the solution of acetate of ammonia of the shops, and is made by mixing together two ounces of subcarbonate of ammonia, and four pints of diluted acetic acid. It is a useful cooling diaphoretic, and is in common use in all *fevers*, for the purpose of relieving heat, relaxing the skin, and promoting a gentle perspiration. Its operation in this way is much assisted by the patient drinking freely of some warm slop, and by his keeping the body moderately warm. It forms a principal ingredient in the common saline draughts, and is generally given in combination with camphor mixture, antimonial wine, and purified nitre. The ordinary dose is from half an ounce to an ounce, given every three or four hours.

Diluted with water, it is externally applied as a lotion to inflamed surfaces.

MURIATIC ACID.

This acid is tonic and antiseptic, and is efficaciously used in *typhus fevers*, *malignant sore throat*, and *cutaneous eruptions*. The good effects of this acid in malignant typhus fever are sometimes remarkable; and Dr. Reich, professor of medicine in the university of Erling, in Franconia, was rewarded with a considerable pension from the King of Prussia, for the success with which he employed it in such cases. I have proved its value in my own practice. Sir William Fordyce also strongly recommends it in the same class of diseases; and Dr. Paris, of London, says, that he has uniformly exhibited it, with success, in the most malignant cases of typhus and scarlet fever, during several years extensive practice in the Westminster Hospital. It is likewise useful in some cases of *indigestion* accompanied with general debility, in the secondary symptoms of syphilis, and in *white* gravel. The dose is from ten to twenty drops, in a tea-cupful of barley water, or infusion of bark. In desperate cases of typhus, half a drachm, or a drachm, may be given at a dose.

In the proportion of a drachm or two in six or eight ounces

of infusion of roses, or decoction of bark, it forms a very useful gargle in ulcerated sore throat.

Its antiseptic properties have been long known. Sir William Fordyce relates, that a dry-salter acquired a large fortune from possessing a secret that enabled him to send out provisions to India in a better state of preservation than any other of the trade; his secret consisted in adding a small quantity of muriatic acid to the contents of each cask.

By pouring a little sulphuric acid on common salt, muriatic acid gas is disengaged, which has the important property of destroying the infection in sick rooms and hospitals, where putrid fever exists.

When this acid is taken as a poison, the best antidotes are soap and calcined magnesia, suspended in water, the patient taking care to drink copiously of warm water, milk, or broth.

MYRRH.

Myrrh is the produce of Arabia and Abyssinia.* It is a stimulant and slight tonic, promoting expectoration, and is, therefore, serviceable in some cases of *indigestion* accompanied with *cough*, in *green-sickness*, *old coughs*, *habitual asthma*, and the latter stages of *pulmonary consumption*. In indigestion, old cough, and habitual asthma, it should be united with a small quantity of sulphate of zinc, in the proportion of six or eight grains of powdered myrrh to half or three fourths of a grain of sulphate of zinc, made into one or two pills with conserve of roses, and repeated twice a day. Thus combined, it has been found extremely useful in the peculiar cough which sometimes accompanies pregnancy, and continues after abortion. In the commencement of pulmonary consumption, it proves too great a stimulant, and is generally injurious; but in the advanced periods it may frequently be given with advantage, when it should be united with sulphate of iron, or zinc. It seems most beneficial in pulmonary ulceration following acute inflammation of the lungs, and other advanced cases of the florid species of consumption. The ordinary dose is eight or ten grains twice or thrice a day, but it may be increased to half a drachm. If there is much hectic fever present, it may be advisable to unite it with a little nitre, or cream of tartar.

* Myrrh is frequently mentioned in the writings of Moses. We find it noticed in the very touching narration of the selling of Joseph, by his brethren, to the Ishmaelites, in *Genesis, chap.* xxxvii. *v.* 25. "*And they sat down to eat bread: and they lifted up their eyes, and looked, and, behold, a company of Ishmaelites came from Gilead with their camels bearing spicery and balm and Myrrh, going to carry it down to Egypt.*" Notwithstanding its being noticed so early, it is remarkable that to this day the plant from which it is procured, and how it is procured, whether by spontaneous exudation, or artificially, is wholly unknown.

The tincture of myrrh diffused in water is an efficacious lotion to the gums when in a spongy and diseased state, and it forms a valuable stimulant application to old fetid ulcers. It is likewise a very useful gargle in putrid sore throat.

MOXA.

The term moxa is given to a cone, or cylinder, composed of a certain quantity of cotton wool, over which a piece of fine linen is rolled, and fastened at the side by a few stitches, the base of which is placed on or near the diseased part to be operated on, the top being set fire to and allowed to burn until the whole is consumed. This conical cylinder should be about an inch long, and of a proportionate thickness. The moxa has been used in the eastern parts of the world many centuries, and among the Chinese it consists of the tomentum of the leaves of the *artemisia latifolia*.

A porte-moxa is intended to fix the cylinder upon the precise spot where the application is to be made. The metallic ring of this instrument is kept from touching the skin by means of three small supports of ebony, which is a bad conductor of heat. After the extremity of the cone has been set fire to, the combustion is kept up by means of a blow-pipe, still allowing it to proceed slowly. The precise spot to which the moxa is to be applied ought to be first marked with a little ink, and all the surrounding surface covered with a wet rag, that has a hole in the middle, so as to leave the part bare which has been marked. After the whole has been consumed, in order to prevent the subsequent inflammation and suppuration from being too considerable, the water of ammonia should be immediately applied to the burnt part.

The diseases in which the moxa has been most efficacious, are *gutta serena*, obstinate pain fixed in a particular part, *tic douloureux*, *partial palsy*, *diseased joints*, and *incipient cataract*. In some examples of these maladies, it has occasionally succeeded beyond expectation, and in others it has given an impulse or new action to the part affected, which has been of decided benefit. It enjoys more confidence among professional men on the continent than with those in this country; but several English physicians and surgeons think highly of it, and when other remedies fail, it ought not to be neglected.*

* In *Thornton's Family Herbal*, p. 692, there is a valuable letter on the use of moxa, from Sir W. Temple, who found it very useful in his own case of gout. Baron Larrey is a strenuous advocate for its employment, and in the two volumes of *Boyle on Moxa*, and *Wallace on Moxa*, its uses are fully described.

NITRE.

Nitre is refrigerant and diuretic. Taken in repeated small doses, of six or eight grains, it abates heat and thirst in fevers and inflammations, diminishes the force and frequency of the pulse, and increases the secretion of urine. It is, therefore, efficaciously given in all inflammatory diseases, and generally forms a part in saline draughts. But it is improper in typhus and hectic fevers. In the foregoing diseases, it is best given in doses of six or eight grains, every three or four hours, dissolved in water, and in combination with the solution of acetate of ammonia, and antimonial wine. In *dropsy*, it may be given to the extent of a drachm every morning, dissolved in ale, and in this manner it has cured several cases.

It frequently affords relief in the advanced stages of indigestion, and what are too often called liver complaints. It is most useful in allaying the general increase of heat, and burning in the hands and feet, which is so apt to come on in these disorders towards night; but it likewise seems to add to the good effects of the other alterative means employed, whenever there is a considerable hardness in the pulse. It is not at all adapted to recent cases of indigestion, nor to those of some standing if there is no evident tightness in the pulse. The dose most extensively useful in the former description of case, is five or six grains, which may be made into a draught with twelve drops of tincture of henbane, and an ounce and a half of water, and taken thrice in the twenty-four hours. If the languor of the circulation be considerable, it will often be better to substitute a drachm of the tincture of orange-peel for the henbane.

A small portion of it allowed to dissolve slowly in the mouth, often removes incipient inflammatory sore throat; and it is a useful adjunct to gargles in that complaint.

In very large quantities, which have sometimes been given by mistake for other salts, it excites vomiting, bloody stools, convulsions, and even death. The best antidotes are opium and aromatics.

NITRIC ACID.

Diluted nitric acid is made by mixing one fluid ounce of nitric acid with nine ounces of distilled water. This acid is tonic and antiseptic, and is of much service in *indigestion, liver complaints*, frequent sickness accompanied with general debility, *old ulcers* depending upon the same cause, and in cases of

gravel where *white* sand is deposited. It is also of great benefit in *syphilis*, and its *secondary symptoms*, and as a tonic to restore the constitution to a measure of its former health, when it has been injured by the excessive use of mercury. It is often employed with great advantage in those cases of indigestion, and chronic affection of the liver, in which the skin has contracted a yellowish tinge, the bowels being costive, the appetite deficient, and the palms of the hands and soles of the feet being frequently affected with a distressing sensation of heat and burning. In such instances, it is sometimes of more value than any mercurial preparation whatever. But many of those cases in which it is so beneficial are not truly liver complaints, but examples of severe indigestion, which this acid cures from its salutary influence on the stomach. In aggravated cases of syphilis, and secondary symptoms, which resist the powers of mercury, it will be found a valuable remedy, even when dropsy has supervened.

This acid is indicated in those cases of gravel in which the urine is alkaline, the water turning turmeric paper inserted in it of a brown colour. In such examples, there are generally symptoms of great debility present.

Dr. Scott, of Russell Square, has strongly recommended a bath, composed of strong nitric and muriatic acid mixed with water for diseases of the liver; and I have known it of striking and permanent benefit in extensive ulceration of the internal surface of the bowels, in which the most efficient mercurial alteratives were of no service, and which appeared to me quite hopeless. I am persuaded, that this bath is invaluable in many cases of disease affecting the stomach and bowels, as well as the liver. The bath is made in the following way: three parts in measure of strong muriatic acid are to be mixed with two of nitric acid, and a pint of this mixture is to have an equal quantity of water added to it. The acid bath is to consist of an ounce and a half of this diluted acid to half a gallon of water, which is in general sufficient to form the bath.* This quantity may be put into a common wash-hand basin, or any other convenient receptacle, into which the feet are to be immersed for twenty minutes, or half an hour, every night, the legs, thighs, and abdomen, being in the mean time frequently sponged with the same. In the winter, the water may be made warm by the addition of a little hot water; but this is not necessary in the summer. The bath may be employed at first daily, for a fort-

* I understand that Mr. Garden, Chemist, in Oxford Street, manufactures a nitro-muriatic acid, which answers extremely well; about half an ounce of it, when mixed with half a gallon of water, forming a bath of proper strength.

night or three weeks, and afterwards, every other day, or only twice a week.

Nitric acid, in the form of lotion, is of great service to foul and indolent ulcers. To form the lotion, one or two drachms may be mixed with a pint of water, with a little of which mixture the whole surface of the ulcer may be touched twice or thrice a day.

The dose of *diluted* nitric acid is from fifteen to thirty drops in two or three ounces of water, three times a day, sweetened with syrup.

OIL OF TURPENTINE.—*See* TURPENTINE.

OPIUM.

The white poppy is a native of the warmer regions of Europe and Asia, but it also grows in colder climates with little diminution of its powers. The larger capsule which it bears, affords, by incision in its cortical part, a milky juice, which, by exposure to the sun and air, becomes concrete, and of a brown colour. This is named opium, and is the product of the plant that is chiefly medicinally employed.

The medicinal virtues of opium are very great, and often of the first importance in the treatment of disease. It operates as a powerful and very diffusible stimulus, but its primary operation is followed by narcotic and sedative effects in a degree much greater than could be expected from the previous excitement it produces. It acts directly on the nervous system, and when taken into the stomach destroys irritability, and allays pain in the most distant parts of the body, independent of the circulation, and without inducing any change on the composition of the blood. As the principle, therefore, on which opium acts is the same over all the body, the topical application of it is capable of producing similar effects, only in a diminished degree, to those resulting from it when it is taken into the stomach. In moderate doses it increases the fulness, force, and frequency of the pulse, augments the heat of the body, quickens respiration, and invigorates both the corporeal and mental functions, exhilarating even to intoxication: but by degrees these effects are succeeded by languor, lassitude, and sleep; and in many instances, head-ache, sickness, thirst, tremors, and other symptoms of debility, such as follow the excessive use of ardent spirits, supervene. Even in small doses it commonly impairs the appetite and digestion, and produces costiveness; yet there are cases of depraved digestion which are benefited

by it, which are those where much pain is felt in the stomach, especially directly after eating or drinking.

The principal indications which opium is capable of fulfilling, are supporting the actions of the system, in the advanced stages of *typhus fever*, and *gangrene;* allaying pain and irritation, in *acute rheumatism*, *small pox*, and many other diseases; relieving spasmodic action, in *hysterics*, *epilepsy*, *Saint Vitus's dance*, &c.; inducing sleep; and checking morbidly increased evacuations, as in *dysentery*, *diarrhœa*, *hæmorrhage* after delivery, *cough*, &c.

In *typhus*, when given in small doses, frequently repeated, it is sometimes a useful assistant to wine and tonics in supporting the actions of the system; and, at the same time, allaying irritation, and obtunding the susceptibility of those morbid impressions which occasion watchfulness, delirium, tremors, and twitching of the muscles. Some caution, however, is required in its exhibition; for, if the heat of the body be much above the natural standard, and the skin dry, opium increases these symptoms, augments thirst, and occasions restlessness; but if moisture be coming on, opium accelerates it, and tranquillity and sleep follow. It is hurtful also when there is any disposition to local inflammation, particularly of the chest; and where there is much determination to the head. It very materially assists the bark in curing ague, and prevents it from running off by the bowels. When given at the approach of the cold fit, it sometimes checks its attack, or shortens and renders it milder, and abates the violence of the hot stage by determining to the surface and inducing sleep.

In *spasmodic* and *convulsive diseases*, it is of the greatest service, especially in tetanus, Saint Vitus's dance, hysterics, colic and cholera morbus. In spasmodic cough it is very useful. It is used with the same benefit in all bleedings which are called passive, and which arise from an increased degree of irritability, where the pulse, instead of being strong and full, is small, quick, and intermitting. In the hæmorrhage of pregnant women it is often of signal service.

The action of opium is much modified by *age*, *sex*, *temperament*, *custom*,* and *climate*, as well as by combination with other articles. The younger the patient, the more energetic is its action on the system: thence extreme caution is necessary in its administration to infants and children. Its very energetic

* Persons long accustomed to its use may sometimes take very large doses, with at least a present exhilarating effect. Dr. Russell, in his History of Aleppo, remarks that a Turk, named Mustapha Shatar, an opium-eater in Smyrna, took daily three drachms of solid opium, and even then found a necessity for increasing the dose. M. Dhere, a French writer, mentions the case of a French officer who took a drachm of pure opium daily. Such persons may sometimes appear in tolerable health, but in general they are pale and emaciated.

action upon infants and children is probably owing to their higher degree of nervous susceptibility; thence in them narcotics generally produce rather irritating than calming effects, and palpitations of the heart and convulsions not unfrequently follow. Women are more susceptible of its action than men, and therefore a smaller dose produces in them a greater effect, and we more frequently find among them than among men those who cannot bear it at all. It produces more decided effects in the *sanguine* than in the melancholic temperament,—in the full than in the spare habit of body; and those individuals who are easily affected by wine, are likewise easily influenced by opium.

In *combination* with aromatics the stimulant effect of opium is increased, and its sedative and narcotic influence lessened; hence the Turks and Persians combine it with confections of aromatics and syrups, and use it as wine for promoting hilarity. When combined with antimonials, it determines more certainly to the surface of the body, and is rendered less likely to impede the other secretions, (see *Dover's powder*): With acids, a much smaller dose will produce a full effect, and is less likely to affect the head or confine the bowels.*

The influence also of peculiarity of habit, called *idiosyncracy*, must not be overlooked. Some persons cannot take opium at all, without its producing the most distressing effects, or operating in a very singular manner; thus in some it produces restlessness, delirium, and convulsions, in others a miliary eruption on the skin. Dr. A. T. Thompson states, *Elem. of Materia Medica, vol.* i. *p.* 506, that he has met with one lady in whom "it never produces its soporific effects until the day following that on which she takes it: and an instance of the same peculiarity in a man is mentioned by Lorry, who also details the case of a woman who was thrown into furious delirium, spasms, and convulsions, even by the external application of opium."

The use of opium is contra-indicated in all morbid states of the body where a strong inflammatory action exists, at least until blood-letting and other active measures have subdued the inflammation, then it may be given with excellent effects; and in pulmonary affections, when the cough is dry and hard, and the expectoration difficult and scanty. In insanity it must be given with great caution, and in the mildest forms.

Externally employed, opium alleviates pain and spasmodic

* In combination, the medical powers of opium are wonderfully extended, so that there is scarcely a disease in which it may not, during some of its stages, be rendered useful. United with ipecacuanha, it forms the compound ipecacuanha powder, which is of eminent utility in acute and chronic rheumatism, dysentery, diarrhœa, and other complaints.

action. Applied by friction, it relieves the pain of cramp, and even of tetanus, and when rubbed over the abdomen, it alleviates spasmodic pain of the stomach and intestines. This mode of employing it, will also succeed in reducing the violence of the paroxysms of mania, and of a furious fit of epilepsy, and in relieving the delirium of typhus fever, by removing irritation and inducing sleep. Opiate friction is also used with great advantage in cholera morbus, hysterics, and hooping-cough.

In exhibiting opium in a *liquid* form, it must not be given in conjunction with oxymuriate of mercury, acetate of lead, sulphate of zinc, iron, and copper, carbonates of alkalies, lime-water, infusion of galls, and infusion of yellow Peruvian bark, as all these substances decompose it. In combination, however, with vinegar and the vegetable acids, its narcotic power is much increased, while its constipating properties are lessened, and it does not affect the head. The celebrated "*Black Drop*," and the "*Sedative Liquor of Opium*" of Mr. Battley, are preparations of opium, which owe their strength and mildness of operation to the manner in which they are prepared with vinegar, or some other vegetable acid.

The dose of this narcotic is very various, according to the state of disease, and the intention with which it is administered. If we wish to obtain its stimulant effect we give small doses at short intervals; if its sedative influence be required, we administer a large dose at once. It is material to observe, that *in all cases of fever or inflammation, when pain or restlessness calls for the use of a narcotic, the dose must be large enough to induce at once its anodyne effect, without the previous excitement.* One grain of solid opium, or twenty-five drops of the tincture, is the medium quantity to a person unaccustomed to its use; but to remove the symptoms of irritation, or relieve pain, it often requires to be given in a larger quantity. Thus Dr. Chapman, of America, says, that in a case of cancer in the womb he has given the tincture to the extent of three ounces or more in twenty-four hours, without any other effect than that of relieving pain. In all highly painful and spasmodic affections, the extent of the dose is to be limited only by its effects: thus, in tetanus, one hundred drops of the tincture have been given every hour with admirable effects, and Dr. A. T. Thompson states, (*Cyclopædia of Practical Medicine, part* xv. *p.* 150,) "in cases of gall-stones and calculi of the kidneys, he has given upwards of eight hundred drops of the officinal tincture of opium in less than twelve hours, without any effect but that of relieving pain and aiding the passage of the concretions."

A quarter of a grain, or eight or ten drops, frequently re-

peated, is in general sufficient to keep up its stimulant effect; and from one to two or three grains act as a sedative, and produce sleep: while in tetanus, hydrophobia, and some other alarming diseases, much larger doses are required, and in the last disease, it has been taken, in the solid form, to the extent of two drachms in twelve hours, without abating the violence of the symptoms. It is employed either in the solid or liquid form; being used in the solid state when we wish it to act slowly, or on the stomach or intestinal canal; otherwise it is more convenient in the liquid form.

Morphia or *morphine* is a peculiar saline substance existing in opium, in combination with an acid called the *meconic*. It is to this *meconate of morphia* that opium owes its soporific and narcotic properties, and it is, therefore, the most important of its constituents. Morphia, separated from opium, is now combined with various acids for medicinal purposes, and extensively used in practice in all cases calling for the use of opium. This is considered one of the most valuable achievements of modern medical chemistry, the *muriate* and *acetate of morphia* especially being esteemed of superior value as displaying the most powerful soporific and narcotic properties, while they affect the head but little, and possess little exciting power. This is true more especially of the *muriate of morphia*, the best of all the salts of morphia. Its dose is from one quarter to three quarters of a grain, in a pill.

The means of counteracting the bad effects of an over-dose of opium are detailed under the head of *Poisons*.

Opium appears almost as the quack's sheet anchor. The various nostrums advertised as "*Cough Drops* for the cure of colds, asthmas, catarrhs, &c." are preparations of opium, very similar to paregoric elixir. *Pectoral Balsam of Liquorice, Essence of Coltsfoot, Grindle's Cough Drops, Squire's Elixir*, and many others, are combinations of this kind; and it behoves the patient to be very cautious in their use, for, as Dr. Fothergill has observed, the mischief that has proceeded from the "*healing*" anodynes of quacks can be scarcely imagined, since opiates generally do much harm in coughs, arising from suppressed perspiration, or an inflammatory state of the system.

OLIVE OIL.

The olive tree is a native of the south of Europe, and the north of Africa, but it is cultivated in France, Spain, and Italy. The best oil is made in Provence, its excellence arising from the olives being carefully cleaned and garbled; but what we receive in this country comes from Lucca and Florence.

Olive oil is demulcent, relaxing, and laxative. It is used internally as a demulcent in cough, and other pulmonary affections, diffused in water by means of mucilage; and is also given internally, in large quantities, to mitigate the action of acrid substances, as some poisons, taken into the stomach. Externally applied, it is a very useful relaxant to the skin; but is generally used as a vehicle for more active substances, in the form of embrocation; thus it is an excellent solvent of opium, which can, through its means only, be used in frictions with any advantage. It is also used as an adjunct to glysters in dysentery, and intestinal abrasions.

OXYDE OF ZINC.

Oxyde of zinc is sometimes called the flowers of zinc, and is tonic and antispasmodic. It has been praised for its virtues in *epilepsy*, *St. Vitus's dance*, *hooping-cough*, *asthma*, and other *spasmodic affections*, in which it is frequently of much service. Gaubius, a foreign physician of great judgment and celebrity, used to recommend it as a remedy for these diseases, in the strongest terms. It may be given in doses of from two to eight grains, twice or thrice a day, made into pills, with extract of gentian or chamomile.

The zinc ointment of the shops is a useful application to sore eyes, chronic inflammation of the eye-lids, and all ulcers which require a stimulating application.

OXYMURIATE OF MERCURY.—

See CORROSIVE SUBLIMATE.

PAREIRA BRAVA.

This is a perennial plant, growing in the West India islands, and in South America. The root, which is the part employed, is brought to us from Brazil; it is long, thick, and covered with a furrowed brown bark.* It has little or no smell; the taste is bitterish, blended with a sweetness like that of liquorice.

It has been for many years in high repute among the Brazilians as a remedy in all obstructions of the urinary organs. The common people of Jamaica use a decoction of it for pains and weakness of the stomach proceeding from relaxation, and it is probable that its effects in urinary disorders are due chiefly to its tonic influence on the bladder. Geoffry, in a paper in-

* "It is woody, fibrous, hard, twisted, of the size of a child's arm, brown externally, of a yellowish grey colour internally, and marked with concentric circles."—*Edwards's Materia Medica*, p. 222.

serted in the *Memoirs of the Royal Academy of Sciences* for the year 1710, reports very favorably of it in ulceration of the kidneys and bladder, and Mr. Brodie speaks strongly in its favor; see his *Lectures on Diseases of the Urinary Organs*, *p.* 170. One of the most prominent symptoms of chronic inflammation of the bladder is an abundant discharge of a ropy adhesive alkaline mucus, and we have Mr. Brodie's testimony to the fact, that the use of the decoction of the root of the *pareira brava* is here frequently productive of excellent effects.

The decoction is prepared by simmering four ounces of the root in three pints of water, until it is reduced to two pints, and then straining; the dose of this decoction is a small tea-cupful (about four ounces) twice or thrice a day. A little tincture of henbane may sometimes be advantageously combined with it.

PAREGORIC ELIXIR.

This is very similar to the *compound tincture of camphor* of the shops, and is made by mixing together two scruples of camphor, one drachm of hard opium in powder, one drachm of acid of benzoin, and two pints of proof spirit; which are allowed to digest for fourteen days, and afterwards filtered.

It is advantageously employed to allay irritation and procure rest in *habitual cough*, *chronic asthma*, and the latter periods of *hooping cough*. It is most appropriate in *dry coughs*. It may also be employed with effect, for the same purposes, in recent cold and cough, after the inflammatory symptoms have abated, but it is highly improper in all cases of cough attended with much fever, pain in the chest, and full quick pulse. Half a fluid ounce of this elixir contains nearly a grain of opium. The dose to procure ease in cough is from one to two tea-spoonfuls occasionally; and three tea-spoonfuls where quiet, rather than sleep, is required.

POMEGRANATE BARK.

This bark comes from Asia and the West Indies. It is a mild astringent, and was formerly much used in *chronic diarrhœa* and *dysentery*. The decoction is now much esteemed as a gargle in sore throats, and as an injection. The ordinary way of making the decoction is with four drachms of the bark and six ounces of water, of which six drachms may be taken every three hours; or it may be taken in the form of powder in doses of from half a drachm to a drachm, in water. The powder is useful to check the diarrhœa in the last stage of consumption.

It is likewise employed as a remedy for tape-worm in the

form of a strong decoction, prepared by boiling two ounces of the bark in a pint and a half of water, until it is reduced to nine ounces, of which a wine-glassful is given when cold, and repeated every half hour to the fourth time. It generally produces nausea in this mode of taking it.

POPPY-HEADS.

Poppy-heads, or the dried capsules of the poppy, possess anodyne properties, and their active matter is extracted by decoction with water. They are chiefly employed either alone or in conjunction with chamomile flowers, boiled in water, as fomentations to inflamed and ulcerated surfaces, in which manner they are often of great service in allaying pain and irritation. The decoction is made by boiling for a quarter of an hour four ounces of the white poppy-heads bruised, in four pints of water, and then straining. The seeds should not be rejected in making this decoction, as they contain a considerable portion of bland oil, which increases the emollient quality of the decoction.

PRUSSIC ACID.

This peculiar acid, commonly called *hydrocyanic acid*, exists in a great variety of native combinations in the vegetable kingdom, the principal of which are *bitter almonds*, the *cherry laurel*, the leaves of the *peach tree*, the kernels of fruit, pips of apples, &c. The prussic acid appears to be the most abundant in the thin pellicle that envelopes the kernel; the fleshy parts of these fruits do not contain it, and even the berries of the *cherry laurel* may be eaten with impunity; yet the distilled water, and oil of this plant, is the most destructive of all narcotic poisons.

In a sufficient dose, it instantly destroys life by extinguishing the nervous energy of the body, and the quantity necessary to produce these fatal effects is very small. It is said, that a very few drops let fall on the eye will speedily kill small animals, as dogs, cats, &c.; and smelling the vapours sometimes occasions vertigo, spasmodic constriction of the lower part of the windpipe, and other deleterious effects.

But skilfully employed in small doses, it is sometimes very useful in *pulmonary consumption*, and *spasmodic coughs* of every description, particularly *asthma*, *chronic cough* and *hooping-cough*. Linnæus informs us, that it was frequently used in Holland in pulmonary consumption, and some eminent medical men of our own country appear to have thought highly of it as a remedy in this complaint, and especially in spasmodic coughs.

It would seem to be most beneficial in coughs and consumption originating in great irritation and disease in the windpipe. It is also useful in those instances of indigestion which are attended with pain and acidity of the stomach, and accompanied with heat and soreness of the tongue; but, upon the whole, it is much inferior to many other remedies for this disorder. The dose is from two to twelve drops, which may be taken in distilled water, almond emulsion, or infusion of Peruvian bark, and repeated twice a day.

It has lately been very much praised as a remedy in various spasmodic disorders, especially in *asthma*, *St. Vitus's dance*, *epilepsy*, and *hooping-cough*. The very strong opinion given by Dr. Anthony Thomson of its value in hooping-cough, I have noticed under that head.

As a local application, it is very efficacious in allaying the *itching* and *tingling* which are so distressing in *tetters*, and other *cutaneous eruptions* which appear on the face, head, hands, &c.; and it not only allays the itching of these pustules, but will often be of much service in promoting their cure. The lotion for external use, is made by mixing a drachm of the hydrocyanic acid with an ounce and a half of rose-water, with which the part affected may be washed three times a day. It may be used advantageously in the following combination, two drachms of the prussic acid, sixteen grains of the acetate of lead, half an ounce of spirit of wine, and eight ounces of distilled water, which are to be mixed together for a lotion. This soothes the irritability of the diseased surface, and disposes the skin to renew its healthy action.

The cherry laurel water *(aqua lauro-cerasi)* acts in the same way as the medicinal prussic acid, but is less energetic. The dose is from six drops to half a drachm. It is much used on the Continent.

QUASSIA.

Quassia wood comes from Jamaica and the Caribbean islands, where it is called the bitter ash. It is said to owe its name to Quassi, a negro slave, who discovered to Polander the wood of this tree, as that which he had employed with success as a secret remedy in the malignant endemic fevers of Surinam. It is a powerful bitter tonic, which is used with much advantage in debility of the stomach and intestinal canal, nervous irritability, intermittent and bilious remittent fevers, looseness, and irregular and atonic gout. It has been said to be highly useful in that combination of debility and hysterics to which the female sex is so prone. Here it is reported to afford more vigour and

relief to the system than the Peruvian bark, especially when combined with a small portion of sulphate of zinc.

Infusion is the best form of administering quassia, which is made by pouring a pint of boiling water on a drachm of the wood, which must be strained when cold. The dose is from one to two ounces given twice or thrice a day.

RHUBARB.

The plant which yields this invaluable root is a native of China and Tartary, and arrives at considerable perfection when cultivated in this country. Many individuals have reared large quantities of it in Great Britain, and some of it extremely good; yet so powerful and unreasonable is prejudice, that very little of it can be sold. There are two principal varieties of rhubarb known in the shops, *Turkey* rhubarb, and *East Indian* rhubarb. The *Russian*, or *Turkey* rhubarb, is in roundish pieces, perforated with a large hole, of a yellow or reddish colour on the outside, somewhat soft and friable, and when broken exhibiting many diverging streaks of a beautiful bright red colour.

It is stomachic and astringent, or purgative, according to the extent of the dose in which it is administered. In the dose of one, two, or three grains, twice or thrice a day, it acts as a valuable stomachic, stimulating the stomach, increasing the appetite, and promoting a healthy flow of bile; and is of much service in *indigestion*, *low spirits*, *jaundice*, and a weakened relaxed state of the bowels. It acts chiefly on the stomach and first intestines, and in these complaints may be advantageously combined with soap, dried subcarbonate of soda, ipecacuanha, or extract of gentian. A pill of two grains of rhubarb, one of ipecacuanha powder, and one of soap, repeated three or four times a day, is sometimes of great benefit in indigestion and bilious complaints, especially of elderly persons.

In doses of twelve grains to a scruple, it opens the bowels freely. Its purgative operation is mild, and it may be given to the youngest infants. It is particularly adapted for the majority of cases of diarrhœa, as it evacuates any acrid matter that may be offending the bowels, before it acts as an astringent; and from its power of strengthening the intestinal canal, it forms a suitable and valuable purgative for children, in whom that canal generally possesses a great deal of relaxation and morbid irritability. As a common purgative in the disorders of childhood, it is far preferable to calomel, being equally effectual in its operation, without possessing any deleterious principle. When it is intended to act on the bowels, it should be

administered in conjunction with about ten or fifteen grains of super-sulphate of potash, which covers its taste, and causes it to act more readily and with greater certainty. This combination has been praised by physicians of great ability as very efficacious in curing the costiveness, bilious affections, enlarged bellies, and other disorders of children, in which it is now a fashionable but pernicious custom to administer calomel.

The powder of rhubarb sprinkled on foul indolent ulcers is sometimes of great use in exciting in them a healthy action.

SAL AMMONIAC.

This salt is a compound of muriatic acid and ammonia. It is found as a product of volcanoes, and the eruption of Etna in 1811, afforded as much sal ammoniac as supplied all the manufactories and apothecaries' shops in Sicily; but the greater part of that which is employed in medicine and the arts, is artificially prepared in the north of England.

It was formerly considered a powerful aperient and attenuant of viscid humours, but is now scarcely ever ordered as an internal medicine. It is, however, frequently employed, dissolved in water, *as a lotion* to *indolent tumours* and *chilblains*, and from its stimulus, is very efficacious in allaying the irritation, and reducing the size of such swellings. It is also the active ingredient in the following plaster, which is one of the best local applications to the chest in severe coughs and pulmonary consumption: Take of soap, one ounce, lead plaster, two drachms, which are to be liquefied together, and when nearly cold, half a drachm of sal ammoniac, finely powdered, is to be added. It is then to be spread on leather, and directly applied to the chest, being renewed every twenty-four hours, otherwise the intention is lost.

One ounce of this salt dissolved in nine ounces of water, an ounce of spirit of wine being afterwards added, forms an excellent lotion for indolent tumours, scrophulous swellings, &c.; but, on account of its stimulus, it is not proper where there is active inflammation in the part.

SAL VOLATILE.

This is the aromatic spirit of ammonia of the shops, and is a useful stimulant cordial in languors, fainting, and flatulent colic. The dose is from half a tea-spoonful to a tea-spoonful, in any agreeable vehicle. It is a grateful medicine to the stomach, and forms an adjunct to many mixtures which are prescribed for the relief of nervous complaints and debility.

SAL POLYCHREST.

This is *a tartrate of soda and potash*, is very similar in its operation to the sulphate of potash, and is a very useful adjunct to rhubarb, the operation of which it quickens and renders more certain. Eight grains of *sal polychrest* and nine or ten of powdered rhubarb, is an efficacious purgative for children, pregnant women, and other persons in delicate health.

SALT OF WORMWOOD.

Salt of wormwood and salt of tartar are the same substance—the subcarbonate of potash. In small doses of eight or ten grains, dissolved in a little rose water, and repeated twice or thrice a day, it is often of great service in indigestion and bilious complaints, especially where there is a good deal of morbid acidity in the stomach. When it agrees with the state of the complaint, it is very grateful to the stomach, and even in the saline draughts, if a bitter is added, it may be used with great advantage, to correct acidity, and strengthen that important organ.

It may be used for all the purposes for which the carbonate of soda is generally employed, but is not so pleasant a medicine. One scruple of this salt, and four drachms of lemon juice, with two or three ounces of water, form the common saline effervescing draught, which is very serviceable in relieving heat, and quenching thirst, in fever.

SARSAPARILLA.

The Sarsaparilla plant is a native of South America and Virginia. The best sarsaparilla grows on the borders of a lake on the north of the Cerra Unturan, not far from Esmeralda; and is celebrated all over South America by the name of *Zarza del Rio Negro*. Baron Humboldt states, that nearly five thousand quintals are annually exported from Vera Cruz.

It is demulcent and alterative, and may often be given with great advantage in various *obstinate internal chronic diseases*, and in *swellings*, *ulcerations*, and other local maladies *depending upon constitutional indisposition*. I have found it of inestimable value in cases of extreme irritation and debility of the mucous membranes of the digestive organs. Some physicians seem to doubt its medicinal powers!—a doubt at which indeed we may wonder, and which proves how soon some men contract doubts,

and how ready they are to express them. In my opinion, it is frequently of incomparable utility in chronic diseases even when used alone, and certainly of great assistance in promoting and establishing the curative effects of an alterative course of mercury in many different complaints. Many eminent practitioners of the present day are very partial to its employment. It was first introduced as a medicine of great efficacy in the cure of *lues venerea*, and I fully believe, that given in conjunction with five grains of blue pill, or Plummer's pill, every night, or every second night, it is equal to the perfect cure of the majority of these cases, and in whatever form they may appear: from such treatment the constitution cannot suffer, while the diseased ulcerations and swellings will be effectually removed. In *nocturnal pains* in the limbs, *painful enlargements* of the knee and elbow joints, *nodes*, and *cutaneous ulcerations*, arising from *a syphilitic taint*, it is superior to any other remedy. I lately had a patient who had taken a great deal of mercury for a syphilitic complaint, with little benefit to the disease for which it was taken, but to the great injury of his general health and strength; his pains were constant and severe, accompanied with loss of appetite, strength, and flesh, numerous swellings and ulcers in different parts of the body, and a quick small pulse; indeed, the poor fellow was reduced to so extreme a state of disease and pain, that he was attacked with severe fits of epilepsy for some days in succession, and we had little hope of his recovery. Notwithstanding, the decoction of sarsaparilla restored him.

Since the preceding remarks were first written, I have had another very remarkable case, establishing the uncommon efficacy of this remedy. It occurred in the person of an officer in the India Company's service, whose life was despaired of from the deplorable condition of his general health, and appearance, but who from close medical attention, and especially from the proper use of sarsaparilla, is now quite equal to all his military duties.

This medicine is best given in powder, or in the form of a compound decoction, and the addition of twenty drops of antimonial wine to each dose, augments its alterative effects. The manner of making this decoction is stated in the *Collection of Prescriptions*. Mr. Moxon, Chemist, of Hull, sells a *Concentrated Compound Decoction of Sarsaparilla*, a little of which, mixed with water, instantly forms a very pleasant decoction. I have examined the preparation, and consider it worthy of general confidence. It may always be had, I understand, from Barclay and Sons, Fleet Market, and, by order, of all druggists.

The powder of sarsaparilla is an invaluable alterative, and is commonly far more efficacious than the decoction. The dose of the powder is from one to two drachms, twice or thrice a day, in water; and the patient should be careful to procure it fresh, and of the best quality.

SENNA LEAVES.

The plant which yields the senna leaves, is a native of Upper Egypt. The best grows in the Vallies of Nubia. In this country, they are usually sold at about sixpence an ounce; yet Buckhardt, the traveller, states, that the Bedouin Arabs, who are the chief collectors of senna, sell it to the merchants of Esne at about one pound sterling per camel load (from 400 to 500 weight).

Senna is a purgative very frequently employed, having a considerable degree of activity, without being liable to be harsh in its operation. The best form of administering it is that of watery infusion, two drachms being infused in four or five ounces of tepid water, to which three or four drachms of compound tincture of cardamoms should be added to prevent griping. Sugar or manna covers its taste, and is a suitable addition when it is given to children. The dose of the above infusion is from one to three or four ounces.

Senna may be advantageously given in combination with any of the purgative neutral salts, as Epsom salt, Glauber's salt, or soluble tartar. Two or three drachms of Epsom salt, an ounce and a half of infusion of senna, and a drachm of tincture of senna, form the common black draught, in so general use among apothecaries.

The tincture of senna of the shops is similar in composition to the famous *Daffy's Elixir;* and, when good, is very little inferior to it.

SERPENTARIA, OR SNAKE ROOT.

This (the *Aristolochia Serpentaria*) is a plant usually rising eight or ten inches in height, a native of Virginia and Carolina, having a slender, flexuous stem. It has an aromatic smell, and a warm, bitter, pungent taste.

It was probably first used in America as a remedy against the bites of serpents, whence its name. It is a warm cordial aromatic tonic, and acts as a diaphoretic. It has been much employed as a cordial medicine to support the powers of life, and promote a free perspiration in *low and putrid fevers.*

It is a very appropriate and useful medicine in *the advanced stages of malignant fevers,* when the powers of life are greatly

reduced, and yet the skin is hot and dry; hence it is of excellent use in confluent small-pox, especially when there is a receding of the eruption.

When joined with bark it often proves of great service, since it makes the bark more cordial, and to sit easier on the stomach. *Agues* yield sooner to the bark mixed with serpentaria than without it, and it forms properly one of the ingredients in the compound tincture of bark.*

In some cases of *indigestion*, the circulation being very languid, the pulse feeble, and the skin dry and harsh, the serpentaria is useful.

Dr. Robert Thornton says, (*Family Herbal, p.* 744)—

"The editor of this work has frequently employed the serpentaria in the low stages of small-pox, and has often found it do wonders in stopping mortification, joined with opium and other cordials; a remarkable instance of which occurred in the case of Mr. Cossart. From a bad fracture mortification came on, and it advanced so rapidly, attended with delirium, that Mr. Astley Cooper and Mr. Luxmore, eminent surgeons, declared all hopes to have vanished, when I ordered serpentaria, which was given, two drachms of the tincture with ten grains in powder, and five drops of laudanum, every three hours, which calmed all the outrageous symptoms, stopped the mortification, and enabled an operation to be performed, by which this gentleman's life was preserved."

It is usually given in the form of infusion, made by pouring twelve ounces of boiling water on an ounce of the bruised root, of which, after straining, an ounce and a half, or three tablespoonfuls, may be taken twice or thrice a day, with or without a little of the tincture. The dose of the tincture alone is one, two, or three tea-spoonfuls in water; and of the powder from six to thirty grains.

SOAP.

Castile or hard soap is an article often employed medicinally, both internally and externally. Given internally, it corrects morbid acidity in the stomach, and favors the natural action of the bowels. It is, therefore, of service in indigestion, bilious complaints, jaundice, gravel, and stone; but in all these diseases it may be advantageously united with rhubarb, ipecacuanha, or extract of gentian. As an external remedy, it is efficaciously used, dissolved in spirit of wine, in frictions to sprains and bruises, and it forms a valuable ingredient in the soap liniment. Dr. A. T. Thomson states, that he has seen much benefit derived from rubbing the tumid bellies of children

* "I have given it in cases of protracted intermittents, especially when these have been combined with cough; and it has removed the disease after quinine and arsenic had failed."—*Thomson's Materia Medica, vol.* i. *p.* 193.

labouring under mesenteric or worm fever, with a strong lather of soap every morning and evening.

The dose internally is from three to twenty grains made into pills, and repeated twice or thrice daily.

SOLUTION OF ACETATE OF AMMONIA.—

See MINDERERUS'S SPIRIT.

STEEL.—

See IRON.

SULPHATE OF QUININE.

This is a new and invaluable preparation of Peruvian Bark, which concentrates in a small compass, all the virtues of the powder of that celebrated substance, and is, therefore, generally resorted to by medical men on account of the smallness of the dose necessary, and the great ease with which it sits on the stomach.

M. M. Pelletier and Caventou, eminent Parisian chemists, first procured *quinine* or *quinia*, from the *yellow* bark of the shops. It is an alkaline salt, which in conjunction with sulphuric acid forms the *sulphate of quinine* or *quinia*. This appears as a pure white powder, in silky needles, scarcely soluble in cold water, more so in boiling water, and completely so in dilute sulphuric acid. It is also very soluble in spirit of wine.

Eight grains of it are equal to about an ounce of the bark in substance; so that the ordinary dose is from one to three grains, twice or thrice a day, or oftener, made into a pill with extract of gentian, or combined with cinnamon water, and syrup and tincture of orange peel.—See the *Prescriptions*. Where it was necessary to administer larger doses at short intervals, as much as five grains have been given every three hours. It is very successfully employed for the cure of ague, and as a tonic and febrifuge in indigestion, general debility, and all the other complaints for which the bark itself is recommended.—See *Bark*.

I have remarked under the article BARK, that those diseases are most benefited by it which assume a regular intermittent type, and would here add, that this obtains even in local affections. A curious case recorded by Mr. Brodie illustrates this in an instructive manner: A gentleman, who had lived many years in a warm climate, became affected with *spasmodic* stricture of the urethra, *which recurred every alternate night* about twelve o'clock, and continued until five or six o'clock in the morning. Mr. Brodie was consulted, and cured the disease, by

anticipating the paroxysm, as we do in the treatment of ague, and administering sulphate of quinine in large doses, at short intervals of time.

Mr. Annesley states, in his book *on the Diseases of India*, that although the bark is the grand remedy in the fevers of India during the cold season, yet it fails *in the rainy season*, in which calomel and antimony only prove beneficial. This is a fact worthy of remembrance.

SPIRIT OF HARTSHORN.

This spirit is stimulant and antacid, and is a useful cordial in lowness of spirits, fainting, and languor; for which purpose it may be taken internally, in doses of fifteen or twenty drops, in any agreeable vehicle. It should not be taken in less than half a tea-cupful of liquid. Twenty drops of this spirit, taken in a tea-cupful of water, and repeated five or six times in each intermission, has sometimes succeeded in curing ague after the Peruvian bark has failed.

Externally, it is used as a grateful stimulant to the nostrils in case of fainting and languor; and united with two-thirds, or one-half the quantity of olive oil, it forms the common domestic stimulating liniment for sore-throat, and relaxation of the throat. This liniment, when rubbed freely over the external part of the throat, is very useful in these complaints.

SQUILL.

Squill is the bulbous root of a plant which grows on the sandy shores of Spain and Italy. It is a stimulating expectorant, and diuretic; and is of great service in chronic cough and asthma, and in dropsy. In large doses it vomits and purges, but is scarcely ever given with either of these intentions.

Its medicinal powers in *cough* and *dropsy* were very early known, and it still retains its character as a remedy of great efficacy, when judiciously exhibited. It is principally adapted to the *coughs*, *asthma*, and *difficulty of breathing* of old people, in which there is an accumulation of mucus within the chest; and in all cases combining it with ipecacuanha, or tartarized antimony, increases its expectorant effect. Plentiful dilution also, with warm mucilaginous liquors, contributes in no small degree to its successful operation. It deserves particular attention, that it can never be employed when the skin is hot and dry, with a hard pulse, or where other marks of inflammation are present; as it then checks instead of promoting expectoration. It is sometimes useful in the latter stages of hooping-

cough. The compound squill pill is a combination of squill with ginger, hard soap, and gum ammoniac, and is a valuable expectorant; the dose of this compound pill is from five to eight grains, twice or thrice a day.

As a diuretic, it is always given in substance, under the form of either the recent or the dried root. The dose of the former is from five to fifteen, of the latter from one to three grains; the smaller dose being given at first every six hours, in the form of a pill, and this increased slowly until the diuretic effect is obtained. Its nauseating operation ought to be avoided by the due regulation of the dose. Its efficacy in dropsy is well ascertained, and is promoted by combination with calomel; indeed, it is more frequently employed in this combination than alone. A little opium should be added to prevent its running off by the bowels. The union of squill with calomel is well adapted to the treatment of dropsy, connected, as it frequently is, with obstruction or chronic inflammation in some abdominal organ, and is more successful in this case than any other diuretic. A grain or two of dried squill, with a grain of calomel, and a fifth of a grain of opium, forms a valuable pill in many dropsical cases, which may be administered every six hours till it takes effect.

There is a syrup and an oxymel of squills sold by druggists, which are frequently used in doses of one or two tea-spoonfuls, to relieve old coughs.

SULPHATE OF ZINC, OR WHITE VITRIOL.

Sulphate of zinc, called formerly white vitriol, is tonic and astringent. It is sometimes very useful in *indigestion*, *whites*, old *chronic cough*, *hooping-cough*, and *pulmonary consumption*, as it stimulates the digestive functions, strengthens the pulmonary organs, and whole system, and represses inordinate secretions from these and other parts. As a tonic, it is less heating and stimulant than preparations of iron, and hence is often preferable in consumption, hooping-cough, indigestion, and other diseases attended with great irritability and general weakness. In indigestion, it may be advantageously combined with some bitter extract, as extract of gentian, &c.; in whites, chronic cough, asthma, and pulmonary consumption, with gum myrrh, or hemlock; and in hooping cough, with extract of gentian or hemlock. When combined with opium, it is of great service in removing the weakness, and frequent motions, without pain, that take place in the protracted stages of dysentery and diarrhœa. As a tonic, the dose is from half a grain to a grain and a half, thrice a day.

In large doses, of from fifteen to twenty-five grains, it operates *instantaneously* as an emetic, and offers, therefore, a prompt resource in cases of poison, or where an immediate discharge from the stomach is required.

As an external application, this salt dissolved in rose-water, in the proportion of ten grains to half a pint of rose-water, forms an excellent collyrium in the latter stage of ophthalmia, after the inflammatory action has subsided. About sixteen grains dissolved in half a pint of water, is a useful injection for the whites; and if twenty grains be dissolved in the same quantity of rose-water, it forms one of the best lotions that can be used to scrophulous tumours, after they have suppurated, and the abscess has been discharged.

SULPHUR.

Sulphur is found native in the neighbourhood of volcanoes, and is imported into this country chiefly from Sicily and Naples.

The sublimed sulphur, commonly called the flowers of sulphur, is laxative and diaphoretic, acting, in a very mild manner, principally on the large intestines, and at the same time determining to the surface of the body. In consequence of the mildness of its operation as a laxative, it is one of the best remedies for *piles*, a disease which generally arises from weakness and irritation in the bowels, of such a description as is always much increased by costiveness, but will not allow of the use of active purgatives. In this complaint, it is best given in conjunction with a little lenitive electuary and cream of tartar.

Its alterative and diaphoretic effects render it serviceable in *chronic rheumatism* and *cough*, in *atonic gout*, *cutaneous eruptions*, *rickets*, *asthma*, and other *pulmonary affections* not attended with acute inflammation; and it is probable, that its beneficial operation in these complaints is, in some measure, owing to its laxative effects. Its power of curing itch is universally admitted.

Precipitated sulphur, or the milk of sulphur, is whiter than the flowers of sulphur, and is procured by receiving the vapours of common sulphur into a vessel filled with steam.

The ordinary dose is one or two drachms, taken in milk. An electuary, made by mixing together three drachms of sulphur, one drachm of cream of tartar, and four drachms of lenitive electuary, is a very useful form for administering this substance, and adapted to all the cases to which the remedy is applicable, in the dose of a tea-spoonful, once or twice a day.

SULPHURIC ACID.

This is the oil of vitriol, and vitriolic acid, of commerce, and is usually prepared by the combustion of sulphur.

It is always employed medicinally under the form of the diluted sulphuric acid, which is made by mixing a fluid ounce and a half of the strong acid with fourteen fluid ounces and a half of distilled water. The usual dose of this diluted acid is from twenty to forty drops, twice or thrice a day, in a wine-glassful of water. As it is injurious to the teeth, it should be sucked through a quill. It is tonic, antiseptic, and refrigerant, and is found of great service in *indigestion*, *diabetes*, *cutaneous eruptions*, and low *typhoid fevers*. It is also a grateful and useful medicine to restrain the colliquative sweats which attend hectic fever. In the first mentioned cases, the diluted acid is generally combined with infusion of bark, gentian, or other bitters. It covers the taste of bark, and causes it to sit easier on the stomach than when given alone. See *Elixir of Vitriol.*

STRYCHNIA.

This is the active alkaline principle of *nux vomica*. The nux vomica tree is large, a native of the East Indies, found on the coast of Coromandel, Cochin China, and in other places, and called there by the name of *Caniram*. The nut is flat, round, about an inch broad, and near a quarter of an inch thick, with a prominence of a grey colour, covered externally with a velvety down, being internally hard and horny. It is intensely bitter.

The nux vomica is a powerful stimulant and narcotic, being in large doses a virulent poison. Notwithstanding, it is sometimes employed medicinally with good effects, especially in paralysis of the lower limbs, or of one side. The dose of the *alcoholic extract of nux vomica* is half a grain, given night and morning, at first, and afterwards three or four times a day: it may be increased to a grain at a dose.

But it is best to give it in the form of *strychnia*. One grain of pure strychnia may be dissolved in one drachm of distilled vinegar, of which solution six minims or drops may be given thrice a day, the dose being cautiously increased to twelve, or twenty minims, or more, until the remedy displays its influence on the system by exciting involuntary tetanic movements or convulsions of the limbs—then the medicine must be either discontinued or much lessened in the dose.

SUGAR OF LEAD.

This is a very powerful astringent and sedative, of marked advantage in restraining *profuse bleeding* from the lungs, womb, bowels, nose, and almost all other internal parts; but from its activity it must be exhibited with caution. The alkalies, alkaline earths, most of the acids, alum, borax, all sulphates and muriates, soaps, ammoniated and tartarized iron, tartarized antimony, and distilled water, decompose it, and should, therefore, never be given with it. It is not uncommon to administer with it Epsom salt dissolved in rose-water, which decomposes it, and renders it useless. Physicians generally consider this salt to be one of the most valuable resources of physic, in case of alarming bleedings from any internal organ. Dr. Paris thinks it of greater efficacy in stopping hæmorrhage from the lungs and womb, than any other known remedy, and he believes its application to be equally safe and manageable, an opinion in which I cordially agree. It should be invariably united with opium. A grain of the acetate of lead, united with one-fourth or half of a grain of opium, and made into a pill with a little conserve of hips, may be given every six hours; in any urgent case of hæmorrhage it may be exhibited every hour, until the bleeding is restrained, and not only so, but the dose of the acetate of lead may be increased to two or three grains.

Ten or fifteen grains of this salt, dissolved in half a pint of distilled water, or in the same quantity of common water, with the addition of half an ounce of distilled vinegar, forms an excellent lotion for inflamed surfaces.

SWEET SPIRIT OF NITRE.

This medicine is a pleasant refrigerant and diuretic, and is used with much advantage in all *febrile affections* to allay heat, and quench thirst, and in *dropsy* as an adjunct to other diuretic remedies. Its operation is greatly increased by dilution with water, or other aqueous vehicle. In fevers, thirty or forty drops of it may be given every three hours, united with two drachms of the solution of acetate of ammonia, and an ounce and a half of water. In dropsy, it may be administered to the extent of a drachm at a dose, combined with other and more powerful diuretics.

It appears that when added in a small proportion to malt spirits, it communicates to them a flavor resembling that of French brandy.

TAR WATER.

Tar water is made by pouring a gallon of water on two pints of the best Norway tar, which is to be stirred with a wooden rod for a quarter of an hour; then, after the tar has subsided, the liquor should be strained, and preserved in well corked bottles for use.

It is stimulant and alterative; and, when its operation is aided by bodily exercise, will frequently prove diuretic. It is certainly useful in some cases of *indigestion*, *scurvy*, *cutaneous eruptions*, and other *chronic diseases*. The celebrated Dr. Cullen, of Edinburgh, thought highly of it, and states, that he has found it to strengthen the tone of the stomach, to excite appetite, promote digestion, and cure all the symptoms of indigestion. Berkeley, the excellent and learned Bishop of Cloyne, through whose strong recommendation the drinking of this water was once so much in vogue, says, "When right, it is not paler than French, nor deeper coloured than Spanish white wine, and full as clear, and that if there be not a spirit very sensibly perceived in drinking it, you may conclude the water is not good. It may be drank cold or warm. As to the quantity, in common chronical indispositions, a pint a day may suffice, taken on an empty stomach, at two or four times, viz. night and morning, and about two hours after dinner or breakfast; more may be taken by stronger stomachs. But those who labour under great and inveterate maladies, must drink a greater quantity, at least a quart every twenty-four hours. In acute cases, for example, fevers of all kinds, it must be drank in bed warm, and in great quantity, perhaps a pint every hour, which I have known to work surprising cures."

We must not, however, forget that the "*surprising cures*" of former days would not be such to us now, but many of our present cures would have been, indeed, surprising cures to our fore-fathers,—and I have not so much faith in the efficacy of tar water as the Bishop of Cloyne had.

THORN APPLE.

The officinal name of this article is *stramonium*. The plant is a native of America, but is now common in this country. It is stimulant, powerfully narcotic, and in over-doses poisonous. It was first recommended as a powerful remedy in *insanity*, but its virtues in this disease are not considerable. It is occasionally of great service in quieting the mind, and procuring rest, in violent paroxysms of *insanity*, but beyond this seems rarely of much advantage. It has been lately considered almost specific

in severe chronic pain of the head, or other parts of the body; but it is with this as with other very energetic substances, what does one much good may be either hurtful or of no service to another. This very active substance requires to be exhibited with caution. It is given either in the form of tincture or extract: of the former, the dose is ten or twelve, or even twenty minims or drops, twice a day, in water; of the latter, one quarter or half a grain, which may be gradually increased to three or four grains, or more, in the twenty-four hours.

Smoking the herb in the manner of tobacco sometimes affords relief in the paroxysm of *spasmodic asthma*, and has lately become a common practice, but it produces violent effects on some persons. It has, from time immemorial, been smoked in Ceylon to relieve asthma, and the poorer Turks use it instead of opium.*

TORMENTIL ROOT.

This is a mild yet powerful astringent, of great service in *looseness* and *dysentery*. It is mild because it operates without producing any stimulant effect, and is, therefore, well adapted to check the *diarrhœa* attendant upon pulmonary consumption, and in other cases of that complaint where the general excitement is considerable. For this purpose, its union with small doses of ipecacuanha powder forms a very eligible medicine, which was highly spoken of by that distinguished physician Dr. George Fordyce.

It is also beneficial in old ulcers, and in those cases of weak bowels where the patient is liable to frequent relaxations, although they may be of short duration.

Its astringency is so powerful, that it has been substituted for oak bark in the tanning of skins for leather.

It may be given in the form of a strong decoction, made by boiling one ounce of the bruised root in a pint of water, of which the dose is from one to two ounces, twice or thrice daily. It is likewise given in substance, the dose of the powder being from half a drachm to a drachm, in dill or simple water, which may be repeated twice or thrice daily, or oftener.†

* The following are judicious remarks respecting the probable operation of the stramonium in smoking it—"It seems to act in two ways: in the first place, it is applied to the mucous membrane in a state of great irritability, and, by operating as a sedative and allaying this state, it permits the secretion of the mucous follicles to be effected more slowly and perfectly; so that the mucus, being formed in a more natural state, is easily separated and excreted: in the second place, by influencing generally the nervous system, the spasmodic symptoms attendant on the paroxysm of asthma are allayed, and respiration proceeds in a calm and undisturbed manner."—*Thomson's Elements of Materia Medica, vol.* ii. *p.* 155.

† "I witnessed once most extraordinary cures performed by this root. A poor man, fond of botanical excursions, either by tradition or accident knew the powers of this root; and by making a strong decoction of it, sweetened with honey, he cured

TURPENTINE.

There are several varieties of turpentine, but the Venice and Canada turpentine, and the oil of turpentine, are those which are chiefly employed internally in the cure of disease. They are all stimulant, diuretic, and cathartic. All turpentines seem to derive their virtues from the oil they contain. If the dose be small, they act chiefly on the kidneys; but when large some degree of nausea is excited, with slight giddiness, and soon a copious discharge from the bowels. In moderate doses, they produce a sensation of warmth in the stomach, raise the pulse, and impart additional excitement to the whole vascular system. They are sometimes beneficially employed in *gleet*, *whites*, *habitual coughs*, and mucous discharges from the urinary passages. Formerly, it was no uncommon practice to give them as a remedy for pulmonary consumption; but in that complaint their heating and irritating qualities never fail to render them injurious. In *old chronic coughs* they are often beneficial. The oil is justly regarded as a useful remedy in *lumbago*, *sciatica*, and other varieties of *chronic rheumatism*, in which complaints its efficacy seems to be often increased by the addition of Peruvian bark. It is likewise of great service in some cases of epilepsy, especially when originating from worms; in infantile convulsions, arising from a disordered state of the stomach and bowels; and in tape worm.

For internal use, the dose of Venice or Canada turpentine is from ten grains to a drachm, made into pills with powdered liquorice root, and repeated three or four times a day. As a diuretic, or stimulant, the oil of turpentine may be taken in doses of from twenty drops to a drachm, thrice daily. By means of a little yolk of egg and mucilage of gum arabic, it may be uniformly mixed with water. When taken to expel the tape-worm, the quantity must be from six drachms to an ounce, or more, repeated every eight hours till the worm is ejected. In these large doses, it is more easily taken when exhibited merely floating upon water, with the addition of a drop or two of oil of cinnamon or anniseed. If it does not operate by stool in four or five hours after it has been taken, a dose of castor oil should be exhibited.

agues which had resisted the bark, long-standing diarrhœas, ulcers of the legs turned out of hospitals as incurable, the worst scorbutic ulcers, fluxes, &c. so as to excite the attention of Lord William Russell, who allowed him a piece of ground out of his park to cultivate his plant, which he kept as a secret; and in fluxes of blood I have found a drachm, given four times a day, in an infusion of hops, do wonders. The danger of suddenly checking discharges should be guarded against, of which this old man knew nothing; and occasional purges should be used, or an issue made in the thigh."—*Dr. Thornton's Family Herbal, p.* 504.

Applied externally, the turpentines increase the tone of the part, counteract indolence of action, and cleanse ill-conditioned ulcers. As local stimulants, they have been efficaciously exhibited in the form of injection, in cases of colic, obstinate costiveness, and the small thread-worm. The oil is the most useful in such instances. It proves also an excellent addition to stimulating embrocations in chilblains, indolent swellings, palsy, &c.

VALERIAN.

Valerian root is antispasmodic and tonic; and is sometimes highly beneficial in those diseases which appear to be connected with a morbid susceptibility of the nervous system, as in *hysterics*, pain of one side of the head, and in some species of *epilepsy*. It is of service in some instances of *hypochondriasis*, or low spirits, and it may (in powder) often be advantageously combined with Peruvian bark; but its very nauseous taste is a great obstacle to its frequent employment. Dr. Cullen thought highly of it as a remedy for nervous disorders, and he remarks, that it should be given in large doses. It is best given in substance, united with a small portion of mace or cinnamon, which in some degree disguises the flavor. The dose is from a scruple to a drachm, given three or four times a day.

The ammoniated tincture of valerian is an elegant and efficacious cordial and antispasmodic, of great benefit to the nervous and low-spirited. The dose is from one to two or three tea-spoonfuls, with a tea-spoonful of tincture of cinnamon, thrice a day, in water; but it should not be given in any bitter infusion.

VINEGAR. *

Vinegar is a weak vegetable acid, produced by exciting the acetous fermentation in substances which have undergone, or are susceptible of, the vinous fermentation. Sugar and water,

* While these sheets are going through the press, I perceive that *veratria*, a very poisonous substance, is marvellously extolled by certain persons for its curative powers, in its external application. All this I do not believe. Interested medical adventurers swarm throughout the land, and especially in London—men who live and die in the propagation of their delusions, and in the pursuit of their ill-earned wealth. It is much to be lamented that professional men, (indeed any set of men,) should be carried away even for a time by the force of temptation, but that they should live and die in their sin, which they must do wilfully, is deeply to be deplored. The former, who are recovered to the strictest integrity and to real disinterestedness, (and who is there that needs not to be brought to this by the exertion of a Divine power?) are objects of commiseration and regard; while the latter may well be pointed at as the pests of society, and their own greatest enemies. In witnessing what we do continually, I cannot but here offer a word of advice and caution on this subject. If the substance spoken of is *simple*, the less caution is requisite in its trial; but if it is *poisonous*, my readers, if they follow my advice, will have nothing to do with it, except it is used under the superintendence of some man of known character and ability.

Veratria is the poisonous principle found in meadow-saffron and other plants.

the saccharine vegetable juices, infusions of malt, malt liquors, cyder, and wine, may be converted into vinegar, by adding to them yeast or any other ferment, and exposing them in vessels to which the air has access, in a temperature between seventy-five and ninety degrees.

Vinegar is sometimes employed as a cooling medicine in fevers, being added to any common diluting drink. When taken into the stomach it is cooling, promotes a gentle breathing perspiration, and the discharge of urine. In inflammatory fevers, it may be used to acidulate barley-water, or any other ordinary beverage of the patient. It is also an efficacious remedy for the scurvy, and one of the best means of counteracting the fatal effects of over-doses of opium, hemlock, and other narcotic poisons. For this last purpose, it should be administered in doses of a table-spoonful, frequently repeated, after the stomach has been freely emptied by a proper emetic.

Diluted with water, and applied externally as a lotion, it is sometimes of much service in burns, bruises, sprains, and chronic inflammation of the eye, and for clearing the eye of small particles of lime, when they adhere to any part of the ball, or the lids. Its odour is grateful when it is sprinkled on the floor of the chamber of the sick in malignant fevers, though it has little efficacy as a fumigation.

WATER.

Common water is an agent of great importance in the prevention, relief, and cure of diseases; and it is, therefore, necessary, that its qualities and effects should be made known in the present work.

Water retains its fluidity under the ordinary pressure of the atmosphere, at any degree of temperature between thirty-two and two hundred and twelve degrees of Fahreneit's thermometer; but under thirty-two degrees it crystallizes and becomes solid, or is changed into ice; and above two hundred and twelve degrees assumes an aëriform character, or becomes steam, expanding to 1698 times its ordinary bulk.

Although water is almost universally diffused over the surface of the earth, it never occurs in a state of absolute purity, which is owing to its extensive powers as a solvent. It is generally found holding earthy matter in a state of mechanical suspension, or saline and other bodies in chemical solution, but the nature and degree of its contamination must necessarily vary according to circumstances and situation. These impregnations, however, are not sufficient in general to give it any very sensible taste or odour, or to render it unfit for the ordinary purposes of life. All

the varieties of common water may be arranged under the three following heads:—

1. Rain Water.
2. Spring Water.
3. River Water.

Rain Water, when collected in the open fields, is certainly the purest natural water, and consequently of the least specific gravity; but when collected in towns, or from the roofs of houses, it contains a small portion of sulphate of lime, soot, and other impurities, and requires to be boiled and strained previous to internal use. Hippocrates gave this advice, and the precaution has been strongly advised by modern chemists and physicians of eminence.

Snow water, when newly melted, is destitute of air, which is the reason that fish cannot live in it; but, when allowed to remain for some time exposed to the atmosphere, it does not differ in its qualities from rain water.

Spring Water, in addition to the substances detected in rain water, generally contains a small proportion of common salt, and frequently other salts. The larger springs are purer than smaller ones, and those which occur in siliceous rocks, or beds of gravel, contain the least impregnation. If it has not filtered through a very soluble soil, it is often almost as pure as rain water.

Well or pump water, which is spring water obtained by digging to a considerable depth, is by no means so pure. It is commonly distinguished by a property named hardness, implying an incapability of dissolving soap; which is owing to its containing many earthy salts, the principal of which is sulphate of lime. *Soft Water* is a more powerful solvent of all vegetable matters than hard water, and is consequently to be preferred for domestic as well as for medicinal purposes; the brewer knows well from experience, how much more readily and copiously soft water will dissolve the extractive matter of his malt. The great superiority, in point of wholesomeness, which soft water has over that which is hard, is proved by many striking facts. Horses, by an instinctive sagacity, always prefer the former, and when, by necessity or inattention, they are confined to the latter, their coats become rough, and ill-conditioned, and they are frequently attacked with the gripes. Hard water has a tendency to produce disease in the spleen of certain animals, especially sheep; and pigeons refuse it when they have been accustomed to that which is soft. Some very eminent and discerning physicians have ascribed the scrophulous swellings, and complaints of gravel, so common in certain districts, to the hardness of the water there, and there is often much to

countenance the opinion. The best mode of freeing hard water of its earthy salts, is first to boil it; then, after it has cooled, to drop into it an alkaline carbonate, or a little carbonate of soda, &c.; and lastly, to filter it.

Probably the purest *spring water* in this kingdom is found at St. Winifred's Well, at Holywell, in Flintshire; at Malvern, and at Matlock; at least, these are well known as very pure waters. All these have acquired much celebrity in the cure of affections of the skin, kidneys and bladder, owing no doubt to the diluting and diuretic effects resulting from their greater purity.

River Water, when the stream is rapid, and runs over a pebbly or siliceous channel, is as pure as the softer spring water; but when the current is slow, and the bed clayey, it approaches nearer to the nature of well water, and frequently contains putrified vegetable and animal matter, as is generally the case in the water of lakes and marshes.

The medicinal properties of water as a diluent are considerable, and were well known to the ancients; and cold water used as a drink in fevers, was the principal remedy of Hippocrates, the father of physic, in these complaints.* The temperature of sixty degrees is the proper degree, where it is intended that water should produce its diluent effects without the aid of heat. Under forty-five degrees it produces a sedative and astringent effect; above sixty degrees, and under a hundred, it relaxes the fibres of the stomach, and is apt to induce nausea; but at a higher temperature, the stimulus of heat prevents that effect. Simple water may supersede the use of all other diluents; but animal and vegetable infusions are generally employed, or toast and water, which is more agreeable to most palates, and is an excellent diluent in fevers and inflammatory diseases. The temperature of water as a diluent should be regulated by the nature of the disease: in internal bleedings, the temperature should not exceed forty-five degrees, but it may be 60 degrees in fevers; unless in the cold stage of the paroxysm of fever, when thirst should be allayed by tepid or warm water, or other bland fluids; and the same precaution is necessary when the sweat has become general and profuse. In cases in which there exists a morbid increase of bile, or of the secretions of the stomach and bowels, disturbing the functions

* A physician now "leaves the quantity to be regulated, in a degree, by the desires of the patient. This is undoubtedly the best guide; and it has been remarked by every writer on diseases, that, in acute fevers, the desire for watery fluids is so striking as to be almost a measure of the degree of fever which rages. As simple water contains nothing in itself noxious, the attention of the physician is required to be directed only to quantity and temperature. And, with regard to both these circumstances, the measure of both may, in truth, be left to the desires of the patient"—*(Thomson's Elem. Mat. Med. vol. 2, p. 671.)*—He means in ordinary cases.

of these organs, the temperature of the water used as drink may be from ninety to one hundred and fourteen degrees; and in some cases of indigestion, which are attended with the sensation of coldness at the stomach, and with cold extremities, a cupful of water, taken hot, affords very considerable relief. Some medicines, as sudorifics, diuretics, emetics, and refrigerants, scarcely produce their effects, unless their operation be assisted by copious dilutions with water, or watery fluids.

Distilled water is transparent, colourless, wholly void of taste and smell, lighter than any other water, and feels softer to the touch when the fingers are wetted with it,—the purest is obtained from rain water, once distilled. It possesses powerful solvent properties, in respect both to animal and vegetable matter, and is capable of pervading the minutest vessels of the body; hence it is of great value as a diluent in most chronic disorders, more especially in urinary, scrophulous, and cutaneous affections. In some cases of such diseases, especially when combined with a spare animal, or a vegetable diet, it has proved of uncommon service. Some curious facts relating to the subject may be found in Dr. Lambe's publications *on the Cure of Constitutional Diseases*.

WILD CUCUMBER.

The expressed juice of the fruit of this plant deposits a fecula, which, when dried, has been known by the name of *Elaterium*. It is a very powerful cathartic, and is supposed, by some physicians, to be the best hydragogue purgative we possess. It is frequently employed in *dropsies*, when purgatives are admissible, and other milder remedies fail in evacuating the water; and it appears, that the ancient, as well as modern, physicians administered it with much confidence and success. Dr. Ferriar, of Manchester, is said to have found it an efficacious remedy for dropsy of the chest. But it is often very violent in its action, and requires to be given with caution, more especially in elderly or debilitated subjects. Its dose is a quarter of a grain, made into a pill, and repeated every second or third hour until it *begins* to operate, when no more should be given until the extent of its operation is ascertained. It is frequently advisable to unite the half grain of elaterium with the same quantity of calomel. The late Dr. Alexander Buchan has observed, that he has known this combination evacuate gallons of water, in numerous instances of dropsy. The patient must always be supported with strong beef tea and bread, &c. during its operation.

WINE.

The term wine is more strictly and especially applied to express the fermented juice of the *grape*, although it is generally used to denote that of *any* sub-acid fruit. The presence of tartar is, perhaps, the circumstance by which the grape is most strongly distinguished from all the other sub-acid fruits, that have been applied to the purpose of wine-making. The juice of the grape, moreover, contains within itself all the principles essential to vinification, in such a proportion and state of balance, as to enable it at once to undergo a regular and complete fermentation, whereas the juices of other fruits require artificial additions for this purpose; and the scientific application and due adjustment of these means, constitute the art of making wines. It has been remarked, that all those wines that contain an excess of malic acid are of a bad quality, hence the grand defect that is necessarily inherent in the wines of this country, and which leads them to partake of the properties of cider; for in the place of *tartaric*, the *malic* acid always predominates in our native fruits.

Various circumstances, such as climate, soil, and the mode of conducting the fermentation, modify the flavour and taste of wine. Wines may be arranged into four classes, viz. 1. *Sweet Wines*, as Malaga, Frontignac, Tokay, Vino Tinto, Montefiascore, Schiras, and the Malmsey wines of the Greek islands; —2. *Sparkling or Effervescing Wines*, as Champagne, Gooseberry, &c.;—3. *Dry and Light Wines*, as Hock, Rhenish, Mayne, Moselle, Barsac, Burgundy, Claret, and Hermitage;— and 4. *Dry and Strong Wines*, as Marsala, Madeira, Port, and Sherry. But notwithstanding these differences, the essential components of all wines are the following: one or more *acids*, especially the malic and tartaric; *extractive matter*, which in old wines is deposited with the tartar; a *volatile oil*, on which the flavour depends; *colouring matter*; and *alcohol, or spirit of wine*, the most important of their ingredients, and that one on which their dietetic and medical properties depend.

Wine, when good, and of a proper age, is cordial and tonic; but when new, it is flatulent, debilitating, and purgative, and intoxicates sooner than old wine. In a dietetical point of view, the temperate use of it promotes digestion, and gives additional energy to the action of the heart and arteries, strengthens the animal functions, exhilarates the spirits, sharpens the wit, and calls into action all the intellectual powers; but when taken in excess, it intoxicates, producing sickness, head-ache, giddiness, and looseness, with nervous tremors which continue for two or three days; and, like ardent spirits, its habitual excessive use, extinguishes the faculties of both body and mind, producing

indigestion, emaciation and debility, inflammation of the lungs and liver, palsy, gout, dropsy, and a long train of diseases and wretchedness. In almost all cases of indigestion, bilious complaints, and other disorders in which there exists great weakness of the stomach, the white wines will be found preferable to the red; they sit easier on the stomach, and do not tend to confine the bowels as the latter do, which are material points, worthy of much attention. For the use of wine as an article of *Diet*, see that head.

As a remedy, wine is stimulant, tonic, and antispasmodic. Its chief medicinal application is in the treatment of fevers of a malignant type, to support the strength of the system in the advanced stages, and to obviate the symptoms arising from debility. With these views, it is given sometimes with more advantage than any other tonic,—a superiority derived from its stimulating power being obtained with more certainty, and being more easily regulated by due administration, from its being more grateful, and probably not requiring to be assimilated by the digestive organs to produce its effects. The quantity in which it is given, is dependent on the state of the disease; the object to be obtained, is that of supporting the strength of the system, until the fever has run its course; the danger to be avoided, is that of giving it so largely as to occasion any degree of exhaustion. The administration is regulated, therefore, by the effects it produces; advantage being always derived from it, when it renders the pulse more slow and firm; when the recurrence of delirium is prevented; when irritation is lessened, and sleep induced. If the pulse be quickened, and the countenance become flushed; if it excite thirst, increase the heat of the body, and occasion restlessness or delirium, it is obviously injurious; and the dose must either be diminished, or its use suspended. In typhus, the proper rule is to give it till the pulse fills, the delirium abates, and the extremities warm; and it should be repeated on the smallest appearance of stupor, quick and sinking pulse, or tremor. A few glasses, given in the space of twenty-four hours, will often produce all that is required from wine; but sometimes very large quantities are necessary. In malignant sore throat, a woman unaccustomed to the use of wine, has taken three bottles of Madeira every day for some time, with marked advantage.

In extensive ulceration, or gangrene, wine is not only the best addition to Peruvian bark and opium, but is a remedy on which alone there is much reliance; and in the convalescencies from all severe diseases, it is an efficacious mean of restoring the exhausted strength and vigour.

When wine is prescribed as a cordial in a state of recovery from any acute disease, or in a weakened state of the habit, it

should not be taken with dinner or any other meal, but at noon, on an empty stomach. In such a case, it is an excellent practice to get a crust of good bread, dip it, piece by piece, into a glass of very old rich wine, as Canary, Tent, Madeira, Sherry, or Port, and take it every day about twelve; it is a valuable cordial. Sometimes in convalescence from a severe disease, the nerves are so irritable as to produce a feverishness in the system, on the application of stimulants, when the quantity of wine used must be small, and Claret, Moselle, or Hock, will be found the best sort.

I ought not to dismiss this article without observing, that the adulteration of wines is a frequent practice among wine merchants, and one which is fraught with much mischief; for so iniquitous are the means made use of by some dealers, to enable them to pass bad wine off as that which is good, that such adulterated wines often operate like slow poisons. They occasion head-ache, pain of the stomach, uneasiness, cough, and difficulty of breathing, and afterwards colic, constipation, palsy, and consumption. Some of the adulterations of wine are rather harmless, others extremely dangerous. The common red wines are frequently made of new, tart, and half-spoiled white wines, by tinging them with red sumach, or other woods or berries. In order to make the wine stronger and more pungent, a variety of spices are employed, such as galangal, cardamom, mace, and the like; or an unfermented mash, wort, or the mash for distilling spirits, are occasionally added, and allowed to ferment together with inferior wines. But the most deleterious of all adulterations of wine, is that with sugar of lead, and other preparations of that mineral. This infamous practice was carried on, some years ago, in Paris to such an extent, that the Excise Office could not account for the prodigious increase of vinegar, entered at the city gates. But it was at length discovered, that this vinegar consisted only of tart and adulterated wines, imported under the pretended character of vinegar, in order to avoid the high duty imposed upon wines, on their entrance into Paris; and sugar of lead, joined to some absorbent earth, was employed to change these vinegars into sweet wines, which destroyed the lives of many thousand persons. This secret, of the utmost importance to health and life, was confessed by a rich old wine merchant, on his death-bed, to relieve in some degree his tortured conscience.

To detect adulterated wines, we must attend to the following particulars: every white or straw-coloured wine, of a sweetish taste, afterwards astringent, and at the same time new; every wine that has an unusually high colour, not in proportion to its strength and age, or the flavour of brandy, penetrating the

tongue; or lastly, an uncommon strong flavour, may be justly suspected of adulteration. Red wines, either of a very deep or a very faint colour; of a woody or tart taste; and those which cover the inside of the glass as well as the bottom of the bottles, with a red settlement, are generally tinged with some colouring substances.

In order to discover whether suspected wine contains any metallic adulteration, we are possessed of an excellent chemical test, discovered by Professor Hahnemann, of Germany, and known by the name of *Liquor Vini Probatorius.* It is prepared as follows: one drachm of the dry liver of sulphur, and two drachms of cream of tartar, are shaken together in two ounces of distilled water, till it be completely saturated with hepatic gas; the liquor is then filtered through blotting paper, and kept in a close-stopped phial. From sixteen to twenty drops of this liquid are dropped into a small glass, filled with wine that is suspected to have been adulterated. If the wine turn only thick with white clouds, and deposit only a white sediment, we may be certain that it contains no metallic ingredients whatever; but if it turn black, or even muddy, if its colour approach to that of a dark red, if it have first a sweet and then an astringent taste, it is certainly impregnated with sugar of lead, or some other impregnation of that metal, equally destructive. If, however, the dark colour be of a blue cast, not unlike that of pale ink, we may suspect the wine to contain iron in its composition. Lastly, if the wine be impregnated with copper or verdigris, it will deposit a sediment of a blackish grey colour. This experiment ought to be made with a fresh-prepared test, and in the open air.

WORMWOOD.

Wormwood is a bitter tonic, of considerable service in indigestion and low spirits; and it has also been used with advantage in ague, gout, and scurvy. Reports have been recently circulated of its having been found of great service in epilepsy. Notwithstanding, it is now seldom employed by British practitioners in these complaints. Its powers in expelling worms are well ascertained, and have bestowed upon it the name of *wormwood.* It will frequently bring away the smaller sorts of worms in great quantities. The dose in powder is from one to two scruples twice or thrice a day. The infusion is made by pouring a pint of boiling water on an ounce of the plant, of which from an ounce to an ounce and a half may be taken twice or thrice in twenty-four hours.

Infused in ale it forms the beverage known by the name of *purl.*

A

COLLECTION

OF

APPROVED PRESCRIPTIONS,

AND

MEDICINAL PREPARATIONS,

ADAPTED TO FAMILY AND DOMESTIC USE.

BALSAMS.

THE subject of this section is not the natural balsams, but certain compositions, which, from their being supposed to possess balsamic qualities, generally go by that name. In strict medical language, however, only those compositions are called balsams which contain benzoic acid.

FRIAR'S BALSAM No. 1.

Is composed of benzoin, purified storax, balsam of tolu, socotorine aloes, and rectified spirit of wine.

It is sometimes very useful in *old coughs* and *asthmas*, as it stimulates the stomach and pulmonary organs, and thus increases the tone of those parts, and promotes expectoration. But it is not proper in recent coughs. It is an excellent application to languid ulcers, which require stimulating. The dose is from twenty to forty drops, twice or thrice a day, on sugar.

It has been celebrated under the name of *Commander's Balsam, Jesuit's Drops, Wade's Drops, Turlington's Balsam, &c.*; and is sold at all druggists' shops under the name of Compound Tincture of Benjamin.

BALSAM OF HONEY. No. 2.

Take of balsam of tolu, an ounce; gum storax, a drachm; purified opium, fifteen grains; best honey, four ounces; rectified spirit of wine, a pint. Let them digest together for five or six days, and strain.

This is a pectoral balsam, serviceable in *coughs* and *colds*, in doses of one, two, or three tea-spoonfuls occasionally, when no fever is present. It is most applicable to habitual coughs. It is the same medicine as is puffed off under the title of *Sir John Hill's Balsam of Honey.*

CATAPLASMS.

Cataplasms, or poultices, are frequently made too thin, by which means the least pressure, or their own gravity, removes them from the part; they should always be thick enough to support a certain form when applied.

The best way of making a common bread poultice, is to scald out a basin, then to put into it a sufficient quantity of bread crumb, and to cover it with boiling water, and after the bread has absorbed as much of the water as it will, the remainder should be poured off, when the poultice is fit for use.

YEAST CATAPLASM. No. 3.

Take of flour, a pound; yeast of beer, half a pint. Mix, and expose the mixture to a gentle heat, until it begins to swell, when it is fit for use.

This cataplasm is of excellent use when applied to painful, foul, or gangrenous ulcers. It affords a gentle yet valuable stimulus to such ulcerations, correcting any existing tendency to mortification, cleansing the wound, and removing the fœtor of the discharge.

MUSTARD CATAPLASM. No. 4.

Take of mustard seed, and linseed, of each, in powder, half a pound; hot vinegar, a sufficient quantity. Mix them to the thickness of a poultice, and they are fit for use.

It is a powerful local stimulant and rubefacient, of great service in obviating a determination to the head in the low stage of typhus or remittent fever, particularly when stupor or delirium is present, and in apoplexy, and many other cases. It is spread on cloth to the thickness of about half an inch, and applied to the soles of the feet, and its rubefacient effects are very quickly produced, and often so powerfully, as to raise blisters on the part. It is rendered still more powerfully stimulant by the addition of one or two table-spoonfuls of oil of turpentine.

CHARCOAL CATAPLASM. No. 5.

Take of linseed meal, half a pound; charcoal powder, two ounces; hot water, a sufficient quantity to make a poultice.

This is a useful antiseptic cataplasm, which has the power of cleansing foul ulcers, and correcting a tendency to mortification, and is applicable to all cases in which these objects are to be fulfilled.

Goulard's Cataplasm. No. 6.

Take of extract of lead, (the liquor plumbi acetatis of the shops,) a drachm and a half; rectified spirit of wine, two ounces; common water, twelve ounces; crumb of bread, a sufficient quantity to make the whole into a proper consistence.

It is beneficially applied to inflamed surfaces, to allay irritation, and reduce the inflammation and swelling.

Hemlock Cataplasm. No. 7.

Pour two pints of water on two ounces of hemlock leaves, and boil till only a pint remains, when as much linseed meal as necessary is to be added.

The hemlock poultice is an excellent application to many cancerous and scrophulous ulcers, and other malignant sores; frequently producing a great diminution of the pain of such diseases, and improving their appearance. The fresh herb bruised, when it can be obtained, forms the best hemlock poultice.

CLYSTERS.

Purging Clysters. No. 8.

Dissolve an ounce of Epsom salt in a pint of barley-water, or thin gruel, or lukewarm water, and then add two ounces of olive oil.

This is a useful purging clyster, of great service in all cases in which it is desirable to procure a speedy evacuation of the bowels.

Anodyne Clyster. No. 9.

Add thirty, forty, or sixty drops of laudanum to four ounces of olive oil. Or add forty or sixty drops of laudanum to four ounces of thin starch, warm.

These clysters are particularly useful in cases in which there is great irritation about the rectum, bladder, or urinary passage; and in dysentery and diarrhœa, after the bowels have been cleared. They have great effect in relieving pain, and diminishing spasm, in all the organs contained within the lower belly.

Clyster for the Colic. No. 10.

Mix two drachms of assafœtida gum with a drachm and a half of sal volatile, half a drachm of laudanum, and ten or twelve ounces of warm gruel, or barley water.

This clyster will frequently operate like a charm in the cure of flatulent colic, and be of much service in other varieties of this complaint, when unattended with inflammation.

COLLYRIA, OR EYE-WATERS.

Astringent Collyrium. No. 11.

Mix ten drops of extract of lead, that is, the liquor plumbi acetatis of the shops, and two drachms of distilled vinegar, with four ounces of distilled water.

This is a good application to inflamed eyes, especially when one of a gently astringent cooling quality is indicated.

Another. No. 12.

Dissolve five or six grains of sulphate, or of acetate of zinc, in four ounces of distilled, or of rose-water.

This is the most common of all eye waters, for the relief of inflammation of the eyes, and in the advanced stages of this complaint it is often advantageously increased in strength.

Anodyne Collyrium. No. 13.

Take of solution of acetate of ammonia, two ounces; distilled water, hot, six ounces; soft extract of opium, ten grains. Dissolve the soft extract of opium in the hot water, strain through fine linen, and add the solution of acetate of ammonia.

In inflammation of the eye, where the pain and irritation are very considerable, this is often productive of great relief.

Another. No. 14.

Take of soft extract of opium, ten grains; camphor, six grains; hot water, twelve ounces. The opium and camphor are to be rubbed together in a mortar, the hot water then added, and the liquor lastly strained through a fine cloth.

This is also an excellent application when there is much pain and swelling.

Collyrium for Specks on the Cornea. No. 15.

Dissolve half a grain of oxymuriate of mercury in four ounces of the best rose-water.

This eye-water is of great service in removing the redness and indolent inflammation, and the white specks, left after an acute inflammation of the eye.

DECOCTIONS.

These are aqueous solutions of the active principles of vegetables, obtained by boiling. They are intended to afford more powerful remedies, than can be obtained by the simple infusion of the same substances in cold or even in boiling water. For making decoctions, the substances to be employed must be divided, if in the dry state, by pulverization, or if fresh, by

slicing, so as to expose an extended surface to the action of the water; which is thus enabled to take up their soluble principles in a shorter space of time, a circumstance of much importance in the preparation of decoctions. Decoctions should invariably be quickly made, because by long decoction in water even in covered vessels, the constituents of many vegetable bodies are liable to re-act upon one another, and produce entirely new compounds, possessed of properties different from those which they previously constituted. They should be strained, while hot, and prepared in small quantities only, as they are apt to ferment and spoil soon. In summer, they ought seldom to be used after they have been made forty-eight hours.

Compound Decoction of Aloes. No. 16.

Take of extract of liquorice, half an ounce; subcarbonate of potash, two scruples; extract of spiked aloes, powdered myrrh, powdered saffron, of each, a drachm; water, a pint. Boil down to twelve fluid ounces, and strain: then add of compound tincture of cardamoms, four fluid ounces.

This is a very mild purgative medicine, of great service in costiveness, bilious and nervous disorders, jaundice, low spirits, accompanied with constipation of the bowels, and female irregularities connected with this state of the intestinal canal. The dose is from half an ounce to four ounces, taken in the morning. In order to obtain its full effect in severe cases, it should be taken every other morning, for two or three months, in such a quantity as just to keep the bowels free, without being purged.

It is very similar to the celebrated *Beaume de Vie*, and may be kept a much longer time than any other decoction without spoiling; indeed, it is more efficacious after being kept a week than when fresh made.

Compound Decoction of Sarsaparilla. No. 17.

Take of sarsaparilla root sliced, four ounces; boiling water, four pints. Macerate for four hours in a vessel lightly covered and placed near the fire; then take out the sarsaparilla, and bruise it. Return it again to the liquor, and macerate in a similar manner for four hours more, first adding of raspings of guaiacum wood, bark of sassafras root, liquorice root bruised, of each an ounce; bark of mezereon root, three drachms. Finally, strain.

This decoction is a successful imitation of the once celebrated *Lisbon Diet-drink*. It operates as a diaphoretic and alterative, and is often of the greatest service in the treatment of chronic rheumatism, cutaneous eruptions, the advanced

stages of indigestion, and many very severe local diseases originating in disorder of the constitution. It is of eminent utility in the secondary forms of syphilis. If it agrees, it generally occasions a pleasant moisture in the mouth, cleans the tongue, and promotes a lax state of the bowels. Should a gentle looseness come on during its employment, it must on no account be checked. It is commonly given in conjunction with some mild mercurial pill. The dose is a quarter of a pint, repeated three or four times a day, or half a pint twice a day.

The *alkaline infusion of sarsaparilla* proves sometimes a more powerful alterative and restorative than the preceding decoction. It appears to have more of a strengthening quality, and to be generally more eligible than the latter, when the patient is troubled with much acidity, and other symptoms of great weakness in the stomach. It is taken in the same doses as the decoction, and is made in the following manner.

Take of sarsaparilla root sliced and bruised, four or six ounces; liquorice root sliced, an ounce; lime water, four pints. Let them digest together in a covered vessel for twelve hours, during which time they should be frequently stirred and shaken. After being strained it is fit for use. See *Sarsaparilla*, page 73.

Decoction of Bark. No. 18.

Take of lance-leaved Peruvian bark bruised, an ounce; water, a pint. Boil for ten minutes in a lightly covered vessel, and strain the liquor while it is hot.

Peruvian bark in this form agrees better with most stomachs than when in powder; but its powers are necessarily diminished. It is given in all cases in which the bark in substance is useful. The dose is from two to five table-spoonfuls, twice a day.

Barley-water. No. 19.

Take of pearl barley, two ounces; water, five pints. First wash away any extraneous substance that may adhere to the barley; then, having poured on it half a pint of water, boil for a few minutes. This water being thrown away, let the remainder be added boiling, then boil down to two pints, and strain.

This is a simple decoction of barley, commonly called barley-water, and is of much service in all fevers, and other acute diseases attended with much thirst and irritation, in which it is taken as freely as the patient pleases. The following is a compound decoction of barley, which is a still more effectual demulcent in cases of pulmonary consumption, strangury, gravel, and other diseases accompanied with fever.

Compound Barley-water. No. 20.

Take of the above simple decoction of barley, two pints; figs sliced, two ounces; liquorice root, sliced and bruised, half an ounce; raisins, stoned, two ounces; water, a pint. Boil down to two pints, and strain.

Two or three tea-spoonfuls of syrup of poppies may be added to this decoction, to obviate its laxative effect, where this might prove hurtful; but, generally speaking, this effect will be an advantage rather than otherwise.

Astringent Decoction. No. 21.

Take of oak bark, an ounce; water, two pints. Boil down to a pint, and strain.

This is a very astringent decoction, which is of considerable use in whites, and the thin whitish discharge which often remains after miscarriage; and in piles and prolapsus of the anus. In the former cases, it is injected up the passage by means of a common syringe, and in the latter, it is used as a lotion. It is also employed as a gargle in sore throat and relaxation of the uvula, in which complaints it may be either used alone, or three drachms of tincture of myrrh or capsicum may be added to every half-pint of the decoction.

It is also an excellent internal medicine in the advanced stages of the snuffles in infants, to give tone to the vessels of the head, and to the constitution at large.

DRAUGHTS.

This is a proper form for exhibiting those liquid medicines in the dose of which it is necessary to be exact, and such other remedies as are intended to operate immediately, and do not need to be frequently repeated, as narcotics, purges, and vomits.

Anodyne and Sleeping Draught. No. 22.

Take of subcarbonate of potash, a scruple; lemon juice, half an ounce; spearmint water, an ounce and a half; laudanum, or Battley's solution of opium, thirty or forty drops; syrup of tolu, a drachm. Mix.

This is a very useful draught to procure sleep, and ease pain, in the majority of diseases. I have already said, in noticing separately the different articles in the Domestic Materia Medica, that *Battley's Solution of Opium*, or the *Black Drop*, are far preferable to laudanum, or any of the common preparations of opium, for procuring sleep, and alleviating pain, since they accomplish these objects without occasioning subsequent head-ache, feverishness, or any other unpleasant symp-

tom. This is a point requiring particular attention when we wish to procure sleep, or ease pain, in diseases attended with inflammatory or febrile symptoms; but it is not so much attended to by professional men as it ought to be.

Another Anodyne Draught. No. 23.

Take of camphor mixture, one ounce; nitrate of potash, four grains; Hoffman's liquor, that is, the compound spirit of sulphuric ether, one drachm; Battley's solution of opium, ten drops, or more; syrup of poppies, one drachm and a half. Mix them together for a draught, to be taken at bed time to procure sleep or allay irritation.

Refrigerant Draught for Fevers. No. 24.

Take of subcarbonate of potash, a scruple; cinnamon water, two drachms; common water, an ounce and a half; syrup of orange-peel, a drachm. Mix them, and when taken, add a table-spoonful of lemon juice, or fifteen grains of citric acid, powdered, and drink it immediately.

This is the effervescing saline draught which is usually given in fevers, and inflammatory diseases, to allay heat, quench thirst, and determine to the surface of the body, for which purposes it is often used with great and immediate effect. It may be repeated every three hours. When the heat and thirst are very considerable, it is frequently advisable to add six or eight grains of purified nitre to each draught, by which its efficacy is much increased.

Carminative Draught. No. 25.

Take of subcarbonate of magnesia, one drachm; rhubarb, in powder, six or eight grains; oil of anniseed, three drops; liquor potassæ, twelve drops; water of ammonia, eight drops; dill or pimento water, two ounces. Mix them together.

This is valuable in neutralizing acidity in the stomach and bowels, relieving depressed spirits, and imparting a comfortable warmth internally. It is aperient, and is very useful in heart-burn and indigestion; and, in the dose of a dessert-spoonful, may be given with great advantage in the gripings and flatulency of infants or young children.

Diaphoretic Cooling Draught. No. 26.

Take of solution of acetate of ammonia, three drachms; camphor mixture, ten drachms; ipecacuanha wine, thirty or forty drops; syrup of tolu, half a drachm. Mix. To be repeated every four hours.

This is very useful, and is in common use, in fevers and inflammations. It promotes a gentle perspiration, relieves heat, quenches thirst, and tends to lower the pulse.

Purging Draught. No. 27.

Take of Epsom salt, Glauber's salt, of each, two drachms; spearmint water, an ounce and a half; antimonial wine, forty or fifty drops; tincture of senna, two drachms. Mix.

This is a very valuable and effectual purgative for all acute diseases and most common purposes. If a purgative be required which will operate very quickly and powerfully, the dose of the salts and senna here ordered, may be increased one half or more.

Common Black Draught. No. 28.

Take of compound infusion of senna, an ounce and a half; cinnamon water, two drachms; manna, a drachm; Epsom salt, one or two drachms. Mix.

This is the common purging draught so much in use with apothecaries on all ordinary occasions.

Emetic Draught. No. 29.

Take of emetic tartar, one grain; powder of ipecacuanha, fifteen grains; common water, an ounce and a half. Mix.

This is commonly employed for unloading the stomach on the accession of fevers, and in ordinary cases.

Another. No. 30.

Take of blue vitriol, (sulphate of copper), ten grains; distilled water, two ounces. Mix.

This operates instantaneously, and is very proper when laudanum, or any other violent substance, has been taken as a poison.

Another Emetic Draught. No. 31.

Take of subcarbonate of ammonia, a scruple; ipecacuanha, in powder, half a drachm; peppermint water, three ounces; tincture of cayenne pepper, two drachms. Mix for a draught, to be taken directly.

In case of poisoning, this is said to be more certain and effectual in arousing the action of the stomach, than either of the preceding draughts.

Antispasmodic Draught. No. 32.

Take of ammoniated tincture of valerian, two drachms; tincture of castor, a drachm; Battley's sedative liquor of opium, twenty drops; camphor mixture, an ounce; syrup of tolu, a drachm. Mix.

This is a valuable antispasmodic in spasm of the stomach arising from flatulence or weakness, and in the hysterics, and convulsive disorders, of the weakly and delicate.

Tonic Draught for the Nervous. No. 33.

Take of compound tincture of bark, ammoniated tincture of valerian, of each, a drachm; compound tincture of aloes, ten or twelve drops; camphor mixture, an ounce and a half. Mix.

This is a strengthening draught of great service to the weakly and nervous. It may be repeated three or four times a day.

Draught for Heartburn. No. 34.

Drop twenty drops of pure water of ammonia into two ounces of almond mixture, or of common water.

This is a powerful remedy for heartburn, and other cases of morbid acidity of the stomach.

Mild Tonic Draught. No. 35.

Take of solution of acetate of ammonia, two or three drachms; decoction of bark, an ounce and a half; tincture of bark, a drachm and a half; aromatic confection, half a drachm. Mix.

This is a mild tonic draught, combined with a diaphoretic, to make it suitable to those cases of disease which call for a strengthening medicine, but which, from the existence of a hot and dry skin, or other symptoms of fever, require us to unite the tonic with a medicine which relaxes the skin, and tends to abate fever.

ELECTUARIES.

Electuaries are mixtures of vegetable and light earthy powders, combined by means of honey or syrup, so as to form masses of a moderate consistence. All substances of this description may, therefore, be made into electuaries; but as the intention of this form of preparation is to render remedies as palateable as possible, those matters only can be employed to form electuaries, the taste of which is not too ungrateful to be covered with syrup or honey.

Astringent Electuary. No. 36.

Take of extract of catechu, an ounce; kino, six drachms; cinnamon bark, nutmegs, of each, two drachms; opium, diffused in a sufficient quantity of white wine, twenty grains; syrup of red roses boiled to the thickness of honey, nine ounces. Reduce the solid ingredients to powder; then mix them with the opium and syrup, so as to form an electuary.

This is a valuable combination of astringents and aromatics, and is often of great service in looseness and bloody flux, especially in the chronical form of these complaints, and in their advanced stages. The dose is from a scruple to two drachms, which may be taken in the form of a bolus, or diffused in cinnamon or dill water, and repeated twice and thrice a day.

Aperient Electuary. No. 37.

Take of cream of tartar, one ounce; milk of sulphur, one ounce; sub-borate of soda, two drachms and a half; syrup of ginger, a sufficient quantity to form an electuary. The dose is one or two tea-spoonfuls at bed-time, or twice a day, according to its action on the bowels, which ought to be moderate.

This acts very mildly as an aperient, and is sometimes particularly useful in aiding the other means employed to remove the uterine obstructions of females.

Electuary for the Piles. No. 38.

Take of flowers of brimstone, half an ounce; lenitive electuary, two ounces; cream of tartar, three drachms; oil of cinnamon, three drops; syrup of orange peel, a sufficient quantity to make the whole of a proper consistence. Mix.

A tea-spoonful, or two, should be taken once or twice a day, so as to keep the bowels gently open. It is a very effectual aperient and alterative for the piles, and will rarely fail in affording great relief.

The manner of preparing the Lenitive Electuary is described under that article at page 51.

EMBROCATIONS AND LINIMENTS.

These are compositions which have the consistence of oil or balsam; so as to allow them to be easily rubbed upon the skin. They are in general more active remedies than cerates or ointments; and act as local stimulants, relieving deep-seated inflammations and pains.

Embrocation for Sprains and Bruises. No. 39.

Take of compound liniment of camphor, an ounce and a half; tincture of opium, half an ounce. Mix.

This is a very useful application to sprains and bruises, after all inflammation has disappeared, and for rheumatic pains. Warmed and rubbed over the surface of the abdomen, it is of much service in allaying the pain of colic unattended by inflammation.

Embrocation for Bruises, when inflamed. No. 40.

Take of solution of acetate of ammonia, and soap liniment, of each, an ounce. Mix.

This is useful when bruises and sprains are accompanied with inflammation.

GUESTONIAN EMBROCATION FOR RHEUMATISM. No. 41.

Take of olive oil, oil of turpentine, of each, an ounce and a half; spirit of vitriol, three drachms. Mix.

This is an excellent stimulant embrocation for rheumatism, sprains, chilblains, and other cases in which an active application is necessary.

SIR ASTLEY COOPER'S CHILBLAIN LINIMENT. No. 42.

Take one ounce of camphorated spirit of wine; half an ounce of the liquor of subacetate of lead.

Mix, and apply in the usual way three or four times a day. It is very efficacious.

ROCHE'S EMBROCATION FOR HOOPING-COUGH. No. 43.

Take of olive oil, eight ounces; oil of amber, four ounces; oil of cloves, a sufficient quantity to scent it strongly. Mix.

This is the same as the famous embrocation of Roche. When rubbed on the chest, it stimulates the skin gently, and is sometimes serviceable in hooping-cough, and the other coughs of children; but in hooping-cough, it ought not to be used for the first ten days of the disease.

VALUABLE LOTION FOR HOOPING-COUGH, &c. No. 44.

Dissolve one drachm of emetic tartar in two ounces of common water, then add half an ounce of tincture of Spanish fly.

This is a very valuable lotion in the advanced stages of hooping-cough, and is likewise of much service in all other coughs, as well of adults as children. It is often of singular utility in removing the distressing cough, and oppression of the chest, left after the hoop has quitted the patient. After it has been rubbed into the chest night and morning for about a week, it will create a redness, and bring out some small pustules, when the lotion should be applied only once a day, and if the part becomes very sore, it may be laid aside altogether, and the pustules anointed, twice a day, with simple white ointment. But it should be remarked, that in very severe cases it will be necessary to continue the use of this lotion until a large crop of pustules appear; and if they are kept discharging freely by an occasional use of it, the relief will be more striking and permanent.

STRONG LINIMENT OF AMMONIA. No. 45.

Take of water of ammonia, or of spirit of hartshorn, an ounce; olive oil, two ounces. Shake them together till they unite.

This is an excellent rubefacient liniment, and is efficaciously employed in inflammatory sore-throat, spread on a piece of flannel, and applied round the throat.

Strong Stimulating Liniment. No. 46.

Take of strong liniment of ammonia, an ounce and a half; oil of turpentine, an ounce; spirits of camphor, an ounce; hard soap, four drachms. Mix them well together.

This is a strong application, suitable for spasms, palsied limbs and severe cases of chronic rheumatism, where there is no inflammation.

EMULSIONS.

Emulsions are mixtures of bland mucilaginous substances with water, and are used to allay irritation in the lungs, alimentary canal, and other parts, and likewise as vehicles for certain substances, which could not otherwise be so conveniently taken in a liquid form.

Emulsion of Gum Arabic. No. 47.

Take of gum arabic, in powder, two drachms; sweet almonds blanched, white sugar, of each, half an ounce; barley-water, warm, a pint. Dissolve the gum in the warm barley-water, and when it is almost cold, pour it gradually upon the almonds, previously beaten to a powder with the sugar, rubbing them at the same time so as to form a milky mixture; then strain.

This is a useful demulcent in common colds and coughs, and in strangury and general irritation about the urinary organs; and as a pleasant vehicle for the exhibition of more active remedies in these and other complaints.

Almond Emulsion. No. 48.

Take of almond confection, two ounces; common water, a pint. Add the water gradually to the almond confection whilst rubbing, and then strain.

Emulsion for Recent Coughs. No. 49.

Take of oil of sweet almonds, an ounce; the yolk of one egg; orange flower water, five ounces; mucilage of gum arabic, half an ounce; ipecacuanha wine, a drachm and a half; syrup of marshmallows, half an ounce. Mix them. The dose is a table-spoonful when the cough is troublesome. This in half the dose may be given to young children for the relief of cough.

Emulsion for Old Coughs. No. 50.

Take of gum ammoniac, two drachms; water, half a pint. Rub the ammoniac well, gradually adding the water until they are thoroughly mixed, and then strain through linen.

This is a useful expectorant in old coughs and asthmas, when no inflammatory symptoms are present. The dose is from one to two table-spoonfuls, united with an equal quantity of almond emulsion.

Egg Emulsion. No. 51.

Rub the yolks of two or three eggs, and a little white sugar, with a pint of cold water, adding to it afterwards a glass of Sherry, Rhenish, or any other light foreign wine, and a little lemon juice, to give it a flavour.

This forms a very nourishing restorative drink, of great benefit in cases of debility, and when a patient is recovering from an attack of some severe disease. This emulsion, without the wine, is a good remedy in coughs, hoarseness, spitting of blood, and costiveness.

EXTRACTS.

These are preparations obtained by evaporating aqueous and spirituous solutions of vegetable substances, until a mass of a somewhat firm tenacious consistence remains. By this means the active principles of many plants are procured in a small compass, and in a state very favourable for the formation of pills, which is a mode of administering medicines far more agreeable to the generality of patients, and, in many instances, the most eligible, as being less offensive to the stomach.

A method of preparing extracts *in vacuo* has lately been introduced by Mr. Barry, of Plough Court, which is far superior to the former methods of conducting the process, especially in preparing the extracts of hemlock, henbane, and other narcotic plants. Indeed, there are no extracts of such plants meriting so much dependence as those prepared *in vacuo*. They may be got also at Apothecaries' Hall.

It is not my intention to describe the mode of making any extracts in this work, as it would be unnecessary and useless; but a few remarks upon the virtues and qualities of some of those in common use, cannot fail to be of service to the reader.

The *Compound Extract of Colocynth* of the shops, when good, is a valuable combination of colocynth and other purgative medicines, which operates much more mildly and effectually than either of them singly, and is an aperient medicine of great repute for its efficacy in obviating and removing costiveness, and relieving all those complaints which depend upon, or are aggravated by, constipation. The ordinary dose is five grains, which may be taken either alone, or combined with half a grain or a grain of calomel.

The *Extract of Gentian* is a useful bitter tonic, containing all the virtues of the plant. It is a convenient vehicle for the exhibition of preparations of steel, zinc, and other metallic tonics. The dose is ten grains twice or thrice a day.

The *Extract of Garden Lettuce*, and the *Extract of Poppies*, are mild narcotics, which are beneficially employed to relieve pain, and procure sleep, in delicate habits, and where there is an objection to the use of opium arising from the presence of inflammation, or from other causes.

The *Extracts of Hemlock*, of *Henbane*, and of *Sarsaparilla*, are excellent forms for administering those medicines, which are of great service in cancerous, scrophulous, rheumatic, and several other severe diseases.

The *Extracts of Bark*, and of *Rhubarb*, are not unfrequently prescribed by professional men, but are not much to be depended upon.

FOMENTATIONS.

Warm fomentations are well known to ease pain, relieve irritation and tension, relax spasm, and induce slight perspiration from the surface to which they are applied; while cold fomentations tend to brace and invigorate relaxed and debilitated parts. They are a simple remedy, but not unfrequently prove of considerable service.

Anodyne Fomentation. No. 52.

Take of white poppy-heads, three ounces; elder flowers, half an ounce; water, three pints. Boil till one pint is evaporated, then strain out the liquor.

This fomentation is used to relax spasm, and relieve acute pain. Sometimes it may be advisable to add three tea-spoonfuls of tincture of opium to it.

Common Fomentation. No. 53.

Take of mallows, dried, an ounce; chamomile flowers, dried, half an ounce; water, a pint. Boil for a quarter of an hour, and strain.

This is a very good fomentation for all common occasions.

Strengthening Fomentation. No. 54.

Take of decoction of oak bark, two pints; alum, three drachms. Mix.

This is an astringent liquor, which is sometimes employed with considerable effect as a fomentation to weak parts.

GARGLES.

These preparations, as well as those last noticed, are simple remedies, but are of no mean efficacy in allaying irritation and inflammation, in promoting a favourable suppuration, or in astringing and invigorating the membrane lining the throat and mouth, according to the nature of the ingredients of which they are composed, and the object to be accomplished in their employment.

Gargles may be divided into four classes, according to the different objects we have in view in employing them: 1. Those employed for the purpose of procuring a subsidence of the irritation or inflammation without the formation of an abscess—what surgeons call resolution; 2. Those proper when suppuration and abscesses are unavoidable; 3. Those employed when the abscess has burst spontaneously, or been laid open; and, 4. Those which are necessary when a tendency to gangrene or mortification has supervened.

When the inflammation is slight, it is of little consequence whether gargles be cold or lukewarm; but when it is more severe, they should be of the same temperature as the body. If we are endeavouring to promote suppuration, their temperature should be higher.

Gargle for Irritation and Inflammation. No. 55.

Take of purified nitre, two drachms; barley water, seven ounces; acetate of honey, seven drachms. Mix. To be used frequently.

Another. No. 56.

Take of muriatic acid, half a drachm; decoction of black currant leaves, or of barley-water, seven ounces. Mix.

These gargles are proper when the object is to reduce the inflammation in the throat without its proceeding to suppuration. They are likewise proper in relaxed sore-throat. The second possesses cleansing qualities, and is proper when the fauces are clogged with viscid mucus. It may be made still more detergent, if necessary, by increasing a little the quantity of acid.

Excellent Domestic Gargle. No. 57.

Mix together, in a half pint tumbler, three tea-spoonfuls of vinegar, two tea-spoonfuls of tincture of myrrh, two of honey, and about one-fourth of the tumbler of Port wine; then fill up the tumbler with lukewarm water, and the gargle is fit for use.

It is both a pleasant and efficacious gargle in all cases of sore-throat. If a decoction of black currant leaves is used instead of lukewarm water, it much improves the gargle.

MUCILAGINOUS GARGLE FOR INFLAMMATION. No. 58.

Take of tincture of myrrh, three drachms; emulsion, or mucilage of gum arabic, seven ounces. Mix.

This is useful to defend the parts when the saliva is thin and acrid.

GARGLE TO PROMOTE SUPPURATION. No. 59.

Mix together equal parts of compound barley-water, and compound infusion of linseed. To be used warm.

When we wish to promote suppuration, the gargle must be mild, and be used warm and in large quantity, that its temperature may not be suddenly reduced, since nothing for this purpose is more powerful than warmth.

After the abscess has burst, our view is to dispose the parts to heal; emollient and gently astringent gargles are the best for this purpose, and by adding two or three drachms of tincture of myrrh to half a pint of compound decoction of barley, we shall have a gargle of this description.

GARGLE FOR THREATENED GANGRENE. No. 60.

Take of tincture of capsicum, six drachms; honey of roses, three drachms; infusion of roses, half a pint. Mix.

ANOTHER. No. 61.

Take of tincture of capsicum, six drachms; infusion of Peruvian bark, five ounces; Port wine, three ounces. Mix.

These are proper when a tendency to gangrene or mortification appears.

INFUSIONS.

Infusions are solutions of vegetable matter, obtained by maceration either in cold or boiling water. The strength and quality of infusions are varied by the degree of temperature of the water: those made with hot water being necessarily stronger, but particularly in the case of bitters; cold infusions are more grateful.

In making infusions, when heat is required, the vessel is to be placed near the fire, so that the temperature of the water may be kept up to the necessary point for a sufficient length of time to produce the effect intended.

Infusion of Peruvian Bark. No. 62.

Take of lance-leaved Peruvian bark, bruised, half an ounce; boiling water, half a pint. Macerate for two hours in a lightly covered vessel, and strain.

This infusion contains a considerable portion of the febrifuge and strengthening matter of the bark. It is very useful in convalescencies from acute diseases.

Bitter Tonic Infusion. No. 63.

Take of gentian root, sliced, half an ounce; dried orange peel, bruised, coriander seeds, bruised, of each, a drachm; boiling water, twelve ounces. Macerate for an hour in a lightly covered vessel, and strain.

The compound infusion of gentian is an elegant and efficacious tonic and stomachic, which is beneficially employed in indigestion, general debility, chronic gout, and other diseases. The dose is from an ounce to two ounces, three or four times a day.

Diuretic Infusion. No. 64.

Take of dried foxglove leaves, a drachm; boiling water, half a pint. Macerate for four hours in a lightly covered vessel, and strain; then add of spirit of cinnamon half an ounce.

This is a form of exhibiting foxglove well calculated to obtain speedily the diuretic effects of the remedy, in dropsical affections.

The dose is from one to two table-spoonfuls, given twice a day, or every eight hours, if the patient be strong, and the symptoms very urgent.

Infusion of Columba No. 65.

Is made in the same way as the last infusion, taking Columba root, instead of foxglove leaves.

Demulcent Infusion. No. 66.

Take of linseed, bruised, an ounce; liquorice root, sliced, half an ounce; boiling water, two pints. Macerate for four hours near the fire, in a covered vessel, and strain.

Compound infusion of linseed is a very useful demulcent, and is efficaciously used as such in inflammation and irritation in the urinary organs, in recent coughs and other disorders, and as a vehicle for other remedies.

Compound Infusion of Senna. No. 67.

Take of senna leaves, an ounce and a half; ginger root, sliced, a drachm; boiling water, a pint. Macerate for an hour in a lightly covered vessel, and strain the liquor.

This is a useful purging infusion, in common use among medical men. It is usually given in conjunction with a little Epsom or Glauber's salt, which forms a purging mixture of great service in all acute diseases.

LOTIONS.

Cooling Discutient Lotion. No. 68.

Take of sal ammoniac, two drachms; water, five ounces; rectified spirit of wine, an ounce. Mix.

This is an excellent cooling lotion for all inflammatory tumours.

Superior Goulard Water. No. 69.

Take of extract of lead, (liquor plumbi acetatis), a drachm; distilled vinegar, two ounces; proof spirit of wine, half an ounce; water, a pint. Mix.

Nitric Acid Lotion. No. 70.

Mix together two drachms of diluted nitric acid, and a pint of water.

The nitric acid lotion is stimulating and detergent, and is very serviceable when applied to foul fœtid ulcers, attended with a thin ichorous discharge, from whatever cause arising. It is also useful in caries of the bone, and when there is an impending mortification. It is a favorite lotion of Sir Astley Cooper in numerous instances of unhealthy ulcerations, which require the application of a mild yet effectual stimulant.

Anodyne Lotion. No. 71.

Take of crude opium, two drachms; warm water, a pint. Rub the opium in a mortar with a little of the warm water, for a few minutes, then pour the remaining quantity of water upon it, and mix them well together.

This is beneficially applied to painful irritable ulcers, and to all painful swellings in which the use of opium is proper.

Astringent Lotion. No. 72.

Take of sulphate of zinc, two drachms; water, a pint; camphorated spirit of wine, two drachms. Mix.

This is a very valuable lotion for piles, and relaxation about the anus. It should be used night and morning.

MIXTURES.

Purging Mixture. No. 73.

Take of Epsom salt, Glauber's salt, of each, half an ounce; spearmint water, five ounces and a half; antimonial wine, two drachms; tincture of senna, half an ounce. Mix.

Useful on all ordinary occasions as a purging medicine. Two, three, or four table-spoonfuls may be taken for a dose, and repeated, if necessary, every three hours till it operates.

Abernethy's Aperient Mixture. No. 74.

Take of Epsom salt, half an ounce; best manna, two drachms; infusion of senna, six drachms; tincture of senna, two drachms; spearmint water, an ounce; distilled water, two ounces. Mix; and take three, four, or five table-spoonfuls every morning, or every other morning.

This was a favorite prescription with Abernethy, and I have known it extremely useful in chronic disorders of the stomach and bowels, when two or three grains of blue pill were taken every second night, during the same period.

Emetic Mixture. No. 75.

Take of emetic tartar, four grains; water, three ounces; syrup of mulberries, two drachms. Mix.

This emetic may be given with great advantage in the commencement of fevers, and in all cases where emetic tartar is proper. It should never be given to infants, nor to very young children, unless under the direction of a medical man, ipecacuanha wine being preferable in such subjects. The dose of this mixture is two table-spoonfuls every ten or twelve minutes till it begins to operate.

Mixture for Recent Cough. No. 76.

Take of honey, five ounces; treacle, a quarter of a pound; best vinegar, seven ounces. Mix them, and simmer in a common pipkin over the fire for fifteen minutes; after removing it from the fire, and the mixture has become lukewarm, add two drachms of ipecacuanha wine. The dose is a table-spoonful every four hours for adults.

In the opinion of the present author, this is one of the best mixtures now known for recent cough. On account of its pleasant taste, it is particularly eligible in the coughs of children and infants.

Tonic Cough Mixture. No. 77.

Take of myrrh, in powder, one drachm and a half; decoction of liquorice, (warm), five ounces and a half. Rub them together, and strain it. Then add, one drachm of aromatic sulphuric acid. The dose is two table-spoonfuls two, three, or four times a day.

This is an excellent strengthening cough mixture, applicable in all coughs where debility and languor are present, provided much inflammatory action does not exist.

Mixture for Chronic and Habitual Cough. No. 78.

Take of mixture of gum ammoniac, cinnamon water, of each, two ounces and a half; ipecacuanha wine, two drachms; paregoric elixir, half a drachm; syrup of tolu, six drachms. Mix.

The dose of this composition is a table-spoonful every four hours, or when the cough is troublesome. It is well adapted to all cases of asthma and chronic cough.

Valuable Cordial Mixture. No. 79.

Take of camphor mixture, four ounces; distilled water, an ounce and a half; carbonate of ammonia, twelve or eighteen grains; compound tincture of cinnamon, and tincture of ginger, of each, one drachm; syrup of ginger, two drachms. Mix them, and take three table-spoonfuls twice or thrice a day.

This is useful in low spirits, debility, and as a cordial tonic in some cases of indigestion attended with acidity and flatulence, or uneasiness in the bowels.

Valuable Gout Mixture. No. 80.

Take of calcined magnesia, four scruples; Epsom salt, six drachms; spearmint water, five ounces; vinegar of meadow saffron, syrup of common saffron, of each, half an ounce. Mix.

This is an excellent mixture for opening the bowels, and mitigating the severity of pain, in gout and acute rheumatism. It was first proposed by Sir C. Scudamore, and is usually administered at the commencement of the attack of gout and rheumatism, a fourth part of it being taken every six or eight hours until the bowels are freely moved; after which it may be continued, in doses of three or four table-spoonfuls, every morning, or every second morning, to keep the bowels in a lax condition, through the whole continuance of these diseases. It is very beneficial also in *chronic* gout and rheumatism.

Fever Mixture. No. 81.

Take of subcarbonate of potash, two drachms; purified nitre, thirty grains; camphor mixture, six ounces; syrup of saffron,

three drachms. Mix, and for a dose take two table-spoonfuls, which should be mixed with an equal quantity of water, and a table-spoonful of lemon-juice, or twenty-five grains of tartaric acid, and drank immediately. This may be repeated every three or four hours.

This is a cooling mixture of much service in all inflammatory fevers, and acute inflammations.

Tonic Mixture for Indigestion. No. 82.

Take of infusion of columba, five ounces and a half; compound tincture of cinnamon, two drachms; syrup of orange peel, two drachms. Mix.

This is an appropriate tonic in indigestion and bilious complaints; and it is useful in checking the severe vomiting which often occurs during pregnancy. The dose is two table-spoonfuls every four hours.

Another. No. 83.

Take of compound infusion of gentian, five ounces; alkaline solution, (page 2), half an ounce, or carbonate of soda, two scruples; tincture of cascarilla, half an ounce. Mix.

This is particularly useful as a tonic in gout, indigestion, and general weakness, accompanied with morbid acidity in the stomach, and symptoms of red gravel. The dose is three table-spoonfuls, repeated three times a day. If the alkali is found too caustic in the mouth when taken in this way, two table-spoonfuls of barley-water, or of common water, may be added to each dose at the time of taking.

Tonic Mixture. No. 84.

Take of decoction of Peruvian bark, six ounces; tincture of bark, two drachms; muriatic acid, forty drops. Mix.

An excellent tonic in typhus, and the low stages of all fevers, in doses of three table-spoonfuls every two, three, or four hours.

An excellent Tonic Mixture. No. 85.

Take of sulphate of quinine, four, six, or eight grains; cinnamon and common water, of each, two ounces and a half; syrup of orange peel, six drachms; tincture of orange peel, two drachms. Mix.

This is a most agreeable and useful way of administering the quinine. The dose is two table-spoonfuls, twice or thrice a day.

Diuretic Mixture. No. 86.

Take of infusion of foxglove, four ounces; tincture of foxglove,

half a drachm; acetate of potash, a drachm; tincture of opium, ten drops. Mix. The dose is a table-spoonful, twice or thrice a day.

This is an eligible mode of exhibiting foxglove in all those cases to which that active substance is applicable.

ANOTHER. No. 87.

Take of purified nitre, two drachms; mixture of gum ammoniac, six ounces; compound spirit of juniper berries, an ounce and a half; vinegar of squill, six drachms. Mix.

The dose is a table-spoonful every four hours. It is worthy of trial in most cases of dropsy.

OINTMENTS AND CERATES.

Ointments and Cerates are compositions of fatty matters, either animal or vegetable, or both, employed as external dressings. They both possess a certain degree of firmness, but ointments are much less firm than cerates. The latter commonly contain a considerable proportion of wax, whence they derive their name.

SPERMACETI OINTMENT. No. 88.

Take of spermaceti, six drachms; white wax, two drachms; olive oil, three ounces. Melt them together over a slow fire, and stir them constantly until they are cold.

OINTMENT OF NITRATE OF MERCURY. No. 89.

Take of purified quicksilver, an ounce; nitric acid, eleven drachms; prepared lard, six ounces; olive oil, four ounces. First dissolve the mercury in the acid; then mix the solution, while it is hot, with the lard and oil melted together. It may be bought in the shops ready mixed.

This is an invaluable composition. It is stimulant and cleansing, and is used with the greatest advantage in scald head, and other eruptions on that part, in chronic inflammation of the eye, and specks on the cornea, and in ulcers. In such cases, it stimulates the part to a healthy action, and will often cure very obstinate examples of these different affections, after other powerful remedies have failed. At first it must be used with the addition of an equal or a double quantity of hog's lard. In scald head and ulcerations, it is either rubbed over the part affected with the finger, or applied spread on linen; and in chronic diseases of the eye, a little is taken on the end of the finger, or on a camel's hair brush, liquefied by the fire, and applied along the inner part of the eye-lid.

Sulphur Ointment. No. 90.

Take of sublimed sulphur, three ounces; prepared lard, half a pound; essential oil of bergamot, twenty drops. Mix them.

This is specific in itch. It should be rubbed on the body every night till the disease be cured, but not more than one-fourth part of the body should be covered with it at a time.

Ointment of Galls. No. 91.

Take of galls, in fine powder, two drachms; camphor, half a drachm; lard, an ounce. Mix them.

This is a very useful application to piles, after their inflammatory state has been diminished by the use of Goulard water, and leeches.

Janin's Ophthalmic Ointment. No. 92.

Take of white precipitate of mercury, prepared tutty, prepared calamine, of each, two drachms; compound tincture of benjamin, a drachm; hog's lard, three drachms. The white precipitate of mercury, tutty, and calamine, being rubbed separately, and afterwards well mixed together, the lard is next to be joined, and lastly, the tincture of benjamin.

This is a celebrated and valuable remedy for indolent inflammation of the eyes and eye-lids, and for specks, films, ulcerations, and all chronic diseases of the eyes. It is applied in the same way as the ointment of nitrate of mercury.

Tartar Emetic Ointment. No. 93.

Take of tartar emetic, in fine powder, one drachm; spermaceti ointment, seven drachms. Mix them together.

About the size of a large nut rubbed over any part night and morning, will speedily bring out a crop of pustules, which should be kept discharging by an occasional use of the ointment for a fortnight. If the irritation thus excited should be at any time great, it may be allayed by applying a warm bread and water poultice, and renewing it as often as agreeable.

Saturnine Cerate. No. 94.

Take of acetate of lead, in powder, two drachms; white wax, two ounces; olive oil, half a pint. Melt the wax in seven fluid ounces of the oil; then add gradually the acetate of lead, separately rubbed down with the remaining oil, and stir with a wooden spatula, until they be thoroughly incorporated.

This is an excellent cooling cerate for burns, excoriations, and other inflamed sores, and for all common purposes. It should be renewed night and morning. It is similar to *Goulard's Cerate.*

Turner's Cerate. No. 95.

Take of prepared calamine, yellow wax, of each, half a pound; olive oil, a pint. Mix the oil with the melted wax; then remove the mixture from the fire, and as soon as it begins to thicken, add the calamine, stirring constantly until it be cold.

This is a cooling drying cerate, very useful in excoriations, simple ulcers, and burns after the inflammation has abated.

Sir H. Halford's Pile Ointment. No. 96.

Take one ounce of the ointment of nitrate of mercury, and the same quantity of almond oil.

Mix them well in a porcelain mortar, and apply a little to the part affected once or twice daily, or as often as occasion requires.

PILLS.

Pills are masses of a consistence sufficient to preserve a round form, yet not so hard as to be of too difficult solution in the stomach. This form of preparation is particularly adapted for medicines which have a very nauseous taste or flavor, and such as operate in minute doses. Extracts, when not too hard, may be formed into pills without any addition; but more generally, pills are composed of either vegetable, or earthy, or metallic powders, combined by means of syrup, mucilage, or gum arabic, or some bitter extract, into a coherent mass. Pills should never weigh more than five grains each.

Purgative Pills. No. 97.

Take of compound extract of colocynth, compound rhubarb pill, of each, half a drachm; calomel, twelve grains; oil of carraway, five drops; syrup, a sufficient quantity to form the whole into a mass. Divide it into fifteen pills.

These are excellent purgative Pills, of great service in fevers, inflammation, and all cases in which such a purgative is required. They evacuate the intestines through their whole extent, and in doses of two or three at bed-time, are pretty certain of procuring some copious evacuations the next day.

One pill, or even half a one, generally operates as a very mild yet effectual aperient, of much benefit in costiveness, low spirits, and on all ordinary occasions.

Alterative Pills. No. 98.

Take of calomel, twenty grains; emetic tartar, two, three, or four grains; resin of guaiacum, in powder, one drachm. Rub

them well together in a mortar for ten minutes, then, with a little conserve of hips, make them into a mass, and divide it into twenty pills.

ALTERATIVE PILLS. No. 99.

Take of blue pill, twenty or thirty grains; tartar emetic, two grains; extract of hemlock, one drachm, or four scruples. Mix them well together, and divide the mass into twenty pills; one of which should be taken every night, or every other night, or under urgent circumstances twice a day.

Both these are excellent forms of alterative pills, and are of eminent service in almost all chronic diseases. They operate mildly yet effectually in altering the diseased condition of action in the smaller vessels of the circulating system, and thus are employed with superior advantage in numerous severe, obstinate, and apparently dissimilar complaints. They enjoy the confidence of the majority of the most distinguished members of the medical profession in this country, and are daily prescribed by them, as well to correct a derangement of function, as to check the progress of organic injury. They are of great service in bilious and liver complaints, diseased joints, scrophulous and other tumours, chronic disease of the eye, and, indeed, in almost all obstinate and protracted maladies. I consider them, without exception, the most valuable alterative medicines known, being more generally applicable to the relief and cure of chronic disease than any other single medicine or combination with which we are at present acquainted.

One pill is given every night, or every other night, for several weeks in succession. If the disease is of an aggravated character, and it is necessary to employ means to check its progress directly, a pill may be administered night and morning, until that object is accomplished, and then the quantity should be reduced to one every night. In very severe diseases, this plan may be persevered in for many weeks or months successively, and with increasing advantage.

MILD APERIENT PILLS. No. 100.

Take of compound extract of colocynth, half a drachm; compound rhubarb pill, a scruple; Castile soap, ten grains; oil of juniper, five drops. Beat them into a mass, and divide into twelve pills.

These are excellent aperient pills for occasional use in costiveness, bilious affections, and on all ordinary occasions. They are suited to the relief and removal of these complaints in children as well as in adults. One pill taken at bed-time is generally sufficient, but some persons may require two.

Digestive Aperient Pills. No. 101.

Take of socotorine aloës, thirty-six or forty grains; rub it well with eighteen grains of gum mastic; and add of compound extract of gentian, and compound galbanum pill, of each, twenty-four grains; oil of anniseed, a sufficient quantity to make twenty pills.

Take two or three of these pills an hour before dinner, or at night. These are stomachic aperient pills, containing an antispasmodic, and producing usually a full feculent evacuation. They are very suitable for persons who have no vital energy to spare, and require a medicine which will operate mildly, surely, and safely.

Strengthening Pills. No. 102.

Take of subcarbonate of iron, a drachm and a half; ipecacuanha, in powder, fifteen grains; aromatic powder, eight grains; extract of gentian, half a drachm; socotorine aloës, in powder, four, six, or eight grains; simple syrup, or mucilage of gum arabic, a sufficient quantity to form the whole into a mass of a proper consistence. Divide it into thirty pills.

Two or three of these pills are to be taken three times a day. They are of great value as a tonic in indigestion, bilious complaints, general weakness, head-ache depending upon a nervous or debilitated state of the constitution, green-sickness, and many other complaints where a mild yet effectual strengthening medicine is required.

Strengthening Pills. No. 103.

Take of sulphate of iron, half a drachm; subcarbonate of potash, ten grains; myrrh, in powder, a drachm; compound powder of aloës, half a drachm. Beat them together, and divide the mass into thirty pills.

These pills are often of the greatest service in green-sickness, and retention or suppression of the menses, accompanied with a languid pulse; and also in indigestion, general debility, and the advanced stages of pulmonary consumption. Two of them may be taken three times a day.

Stomachic Pills. No. 104.

Take of rhubarb, in powder, two scruples; ipecacuanha, in powder, twenty-four grains; Castile soap, two scruples; syrup of orange peel, a sufficient quantity to make the whole into a mass, to be divided into twenty-four pills. One to be taken thrice a day.

These are very valuable stomachic tonic pills, in indigestion and bilious affections, and in many complaints which depend on derangement of the important organs of digestion, such as sick head-ache, frequent nausea, deficient appetite, and stomach

cough. Their principal operation is on the stomach and first intestine (duodenum), and by exciting a new and healthy action in these organs, they frequently secure a healthy flow of bile, and are productive of the most beneficial consequences to the constitution generally.

PILLS FOR CHRONIC COUGH AND ASTHMA. No. 105.

Take of compound squill pill, a drachm; ipecacuanha, in powder, fifteen grains. Mix them well together with a little syrup, and divide the mass into fifteen pills. One to be taken three, four, or five times in the twenty-four hours.

This is a useful stimulating expectorant in all cases of indolent habitual cough, and in asthma.

ANOTHER FORM. No. 106.

Take of myrrh, in powder, a drachm and a half; sulphate of zinc, ten grains. Mix them well together in a mortar, and, with a sufficient quantity of conserve of roses, make them into a mass. Divide it into twenty-four pills.

This is a stimulating tonic pill, which is sometimes very serviceable in chronic cough and asthma. One or two pills may be taken three or four times a day.

PILLS FOR RECENT COUGH. No. 107.

Take of extract of hemlock, prepared in vacuo, one drachm; ipecacuanha, in powder, ten or twelve grains; hemlock, in powder, a sufficient quantity to make the whole into a mass. Divide it into eighteen pills. One or two to be taken twice or thrice a day.

These pills are sometimes of the greatest service in recent cough of almost every description. They promote expectoration, allay fever, and relieve irritation and pain in the organs of the chest. They are useful in the hooping cough, both of children and adults.

ANOTHER FORM. No. 108.

Take of extract of hemlock, extract of white poppies, of each, a drachm; ipecacuanha, in powder, fifteen grains. Mix them well, and divide into thirty pills. Two to be taken thrice a day.

This prescription is applicable to the same cases as the last.

ANODYNE DIAPHORETIC PILL. No. 109.

Take of opium, from half a grain to a grain; camphor, three grains; James's powder, one or two grains; conserve of hips, a sufficient quantity to form a pill.

This is a very useful pill to procure sleep, and ease pain, in the majority of diseases. It tends to relax the skin at the same time that it relieves pain. It may be given at bed-time, or once or twice in the day, according to circumstances.

Anodyne Pills. No. 110.

Take of compound ipecacuanha powder, two scruples; extract of hemlock, prepared in vacuo, (page 108,*) a drachm. Mix them together, and divide into twenty pills.*

These pills have in general great power in alleviating pain and irritation in most local complaints. There are very few painful maladies in which they are not both appropriate and useful. Where some anodyne is frequently called for, they are far better than the usual preparations of opium, because they do not affect the head, or distress the constitution, while they often exert more than a palliative effect. One or two pills, twice or thrice a day, is the proper dose.

Sometimes the extract of henbane may be advantageously substituted for the extract of hemlock, if the above combination is not sufficiently anodyne.

Pills to procure Sleep. No. 111.

Take of camphor, four grains; nitrate of potash, five grains; extract of henbane, prepared in vacuo, four grains, (or more); syrup of poppies, a sufficient quantity to form the mass into three pills, which may be taken at bed-time.

This is a valuable pill for procuring sleep when opium cannot be given with propriety, and especially when the patient complains of heat or feverishness at night.

Pills for Acute Inflammation, &c. No. 112.

Take of calomel, ten grains; James's powder, ten grains; Turkey opium, in powder, ten or fifteen grains; conserve of hips, a sufficient quantity to form the ingredients into a mass, which is to be divided into ten pills.

One of these pills may be given in acute inflammation of the lungs, bowels, or any other part, every second, third, or fourth hour, according to the severity of the symptoms, and the urgency of the case. They are of the greatest service in such cases, when joined with the use of the lancet, and other proper means, and ought never to be neglected when the existing disease is dangerous.

Pills for the Jaundice. No. 113.

Take of socotorine aloes, rhubarb, in powder, and Castile soap, of each, a drachm; oil of juniper, fifteen drops. Make them into a mass with a little syrup or mucilage of gum arabic, and divide it into forty pills.

Two of these pills may be taken twice or thrice a day. They are sometimes of great service in jaundice, bilious affections, costiveness, and obstructions of the digestive organs.

Pills for Red Gravel. No. 114.

Take of dried subcarbonate of soda, a drachm and a half; compound powder of cinnamon, half a drachm; Castile soap, half a drachm; balsam of Peru, a sufficient quantity to form the whole into a mass, to be divided into thirty pills.

Three of these pills may be taken thrice a day, in *red* gravel and stone, with much advantage.

Pills for the Ague. No. 115.

Take of sulphate of quinine, a drachm; extract of gentian, sufficient to divide it into thirty pills.

One of these pills taken every third, fourth, or fifth hour, will prove in general a certain cure for the ague, unless some internal obstruction prevent it. They are also a valuable tonic in many cases of general debility.

Pills for Dropsy. No. 116.

Take of calomel, twenty or thirty grains; tartar emetic, two grains; compound squill pill, a drachm; opium, in powder, three grains; oil of juniper, a sufficient quantity to make the whole into a mass, which is to be divided into twenty pills. The ingredients must be well rubbed together in a mortar before the oil is added.

One pill may be taken in dropsy twice or thrice a day, until the symptoms permanently give way, when they should be taken less frequently. They form an invaluable remedy in all varieties of dropsy.

Plummer's Pills. No. 117.

Take of calomel, twenty grains; precipitated sulphuret of antimony, twenty grains; gum guaiacum, in powder, two scruples. Rub them well together in a mortar for ten minutes, and with a little conserve of hips, divide them into twenty pills.

These are valuable alterative pills, first recommended by Dr. Plummer, a respectable physician in Scotland, for the cure of diseased joints, bilious complaints, and many other chronic maladies, in which they are certainly an appropriate and efficacious remedy. The dose is one once or twice a day.

Diuretic Pills. No. 118.

Take of blue pill, half a drachm; squill, in powder, a scruple; conserve of roses, a sufficient quantity to divide them into twenty pills.

One of these pills is taken every eight hours in dropsy of the belly, and general dropsy.

Sir H. Halford's Aperient Pills. No. 119.

Take of blue pill, twenty grains; compound extract of colocynth, thirty grains. Mix and divide into one dozen pills.

One or two of these pills taken for a dose, every second or third night, or as occasion requires, will act as a mild and effectual aperient. If taken regularly three times a week, for six or eight weeks, in such quantities as keep the bowels gently open without purging, they will frequently prove a valuable alterative medicine of great service in indigestion, bilious, and nervous disorders, and other chronic maladies.

POWDERS.

This is the simplest form of administering medicines; but those remedies which are very unpleasant to the taste; those which deliquesce rapidly when exposed to the air, or are very volatile, and those which require to be given in large doses, or which are not diffused readily in water, cannot with propriety be administered in the form of powder.

Generally speaking, a fine impalpable powder is preferred for those substances which are exhibited in this form; but Peruvian bark, rhubarb, ipecacuanha, and guaiacum, operate more powerfully in the state of coarse powder.

As powders are generally affected by the action of the air and light, they should be kept in opaque or green glass bottles; a practice not sufficiently adhered to either by druggists or apothecaries.

The lighter powders, such as powder of bark, rhubarb, &c. may be taken in any agreeable thin liquor, as tea, or water-gruel. The more ponderous, such as calomel, antimony, and other mineral preparations, will require a more consistent vehicle, as thick syrup, jelly, or honey.

Purgative Powder. No. 120.

Take of calomel, two grains; jalap, in powder, rhubarb, in powder, of each, five grains. Mix them.

This may be taken in any agreeable or convenient vehicle. It is a useful purgative for ordinary purposes.

Aperient Powder. No. 121.

Take of rhubarb, in powder, six or eight grains; super-sulphate of potash, eight grains. Mix them.

This is a mild and efficacious aperient for children and adults. It is of great service in the enlarged bellies, and bilious disorders of children, to whom it may be given in such

cases every other morning, until the disease be overcome. Sir William Fordyce was very partial to its use in the disorders of children and infants: and it would be well if mothers, who are fond of administering calomel to their tender offspring on all ordinary occasions, were to lay it aside for this more mild and suitable formula.

Worm Powder. No. 122.

Take of calomel, two or three grains; compound powder of scammony, ten grains. Rub them well together.

This is an efficacious powder for the expulsion of worms from children and adults, and it may be repeated twice a week, or oftener, till the object be accomplished.

Emetic Powder. No. 123.

Take of ipecacuanha, in powder, fifteen grains; emetic tartar, a grain. Mix them.

Proper on ordinary occasions.

Fever Powder. No. 124.

Take of James's powder, four grains; calomel, one fourth of a grain; compound powder of tragacanth, six grains. Mix them.

This is a valuable diaphoretic cooling powder in the commencement of inflammatory and typhus fever, measles, small-pox, and other febrile affections, after the stomach and bowels have been emptied by an emetic and purgatives.

Powder for Rheumatism. No. 125.

Take of Peruvian bark, in powder, a scruple; ipecacuanha, in powder, a grain. Mix them.

This is often of eminent utility in acute rheumatism, after bleeding, and the exhibition of purgatives. It is also sometimes very beneficially employed in chronic rheumatic pains and swellings. It may be repeated every three or four hours.

Diuretic Powder. No. 126.

Take of cream of tartar, a drachm; dried squill, in powder, two grains; ginger powder, four grains. Mix them.

Proper in dropsy of the belly and general dropsy.

Astringent Powder. No. 127.

Take of tormentil root, in powder, half a drachm; ipecacuanha, in powder, a grain. Mix them.

This is a mild and effectual astringent, which is beneficially employed in diarrhœa and dysentery, and may be repeated every three or four hours, or after every liquid stool. Unlike

the ordinary astringents, it does not prove stimulant, and is, therefore, particularly indicated in the looseness attendant on pulmonary consumption, and in other cases of looseness or flux where fever is present.

Astringent Powder. No. 128.

Take of compound powder of ipecacuanha, three grains; compound powder of cinnamon, eight grains. Mix them.

This is another astringent powder of great value in looseness and flux. It tends to relax the skin at the same time that it astringes the bowels, and is effectually employed to allay pain in such diseases. It may be repeated every three or four hours.

Anodyne Diaphoretic Powder. No. 129.

Take of James's powder, or of antimonial powder, three grains; carbonate of ammonia, four grains; compound powder of ipecacuanha, four grains. Mix them.

This is very useful to allay pain and procure sleep, in gout, rheumatism, and in the majority of diseases. It may be taken in a little jelly, and be repeated every four hours, if necessary.

Tonic Powder. No. 130.

Take of Peruvian bark, in powder, one or two scruples; ipecacuanha, in powder, half a grain; compound powder of cinnamon, eight grains. Mix them.

This is a useful strengthening powder in all cases in which the bark is admissible. It is an eligible mode of administering that remedy for the cure of ague.

PLASTERS.

These are solid tenacious compounds, adhesive in the ordinary heat of the body. The base of the majority of plasters is a chemical combination of the semi-vitreous oxyde of lead and oil; but some of them owe their consistence to wax and resin; and others contain no oily nor fatty matter whatsoever.

Warm Plaster. No. 131.

Take of blistering plaster, one part; Burgundy pitch, fourteen parts. Melt them together with a moderate heat, and mix them so as to form a plaster.

This plaster is stimulant, and creates a slight irritation on that part of the skin to which it is applied. It is used with advantage in common cough, hooping-cough, sciatica, and local pain.

Resolvent Plaster. No. 132.

Take of purified ammoniac, a pound; purified mercury, three ounces; sulphureted oil, a fluid drachm. Rub the mercury with the sulphureted oil until the globules disappear; then add gradually the ammoniac previously melted, and mix the whole together.

This is one of the most powerful plasters now known for promoting the absorption of glandular and other hard swellings. It is applicable to almost all hard indolent tumours, but perseverance in its use is absolutely necessary in order to obtain its full effect. It is a useful application to corns and bunions, and is sold in the shops, ready mixed, under the title of plaster of ammoniac with mercury.

Cumin Plaster. No. 133.

Take of cumin seeds, carraway seeds, laurel berries, of each, three ounces; dried pitch, three pounds; yellow wax, three ounces. Melt the pitch and the wax together, then add the other ingredients in powder, and mix.

This is a stimulant and discutient plaster, frequently applied to the lower part of the abdomen in flatulence and a cold feeling of the bowels, and likewise to indolent tumours.

Adhesive Plaster. No. 134.

Take of yellow resin, half a pound; lead plaster, three pounds. Melt the lead plaster by a gentle heat, then add the resin in powder, and mix.

This is the plaster commonly applied to cuts, and to retain together the lips of recent wounds. It is also of very great service in old and indolent ulcers, to which it affords a proper support, and thus relieves the sensations of weakness and pain, and promotes their healing. In these cases, the plaster spread on calico should be cut into strips of two inches wide, and fifteen or sixteen inches long, which are to go completely round the limb, and such a number of strips applied as will cover the ulcer or ulcers, and an inch or two of the surface both above and below them. They must be applied rather tightly, and should be renewed once in twenty-four hours. It is sold in the shops ready spread.

Anodyne Plaster. No. 135.

Take of hard opium, powdered, half an ounce; resin of spruce fir, powdered, three ounces; lead plaster, a pound. Melt the plaster and the resin together, then add the opium, and mix the whole.

This plaster has some effect in relieving rheumatic and other local pains, in different parts of the body.

Plaster for Cough. No. 136.

Take of Castile soap, an ounce; lead plaster, two drachms; sal ammoniac, finely powdered, half a drachm, or a drachm. Melt the soap and lead plaster together, and when the mixture is nearly cold, add the sal ammoniac.

This is to be spread on leather, and applied to the chest immediately after it is spread. It must be renewed every twenty-four hours, otherwise the intention is lost.

It is sometimes of much service in hooping-cough, asthmatic and consumptive coughs, &c.; and is certainly superior to a plaster of burgundy pitch.

Blistering Plaster No. 137.

I need not give directions for making this plaster, as no private or even professional individual ever thinks of preparing it; but a few remarks on the application and dressing of blisters may with propriety be here introduced.

A blistering plaster requires to remain applied for twelve hours at least, and sometimes longer, to raise a perfect blister; it is then to be removed, the vesicles are to be cut at the most depending part, and, without removing the skin, the blistered part is to be dressed with simple cerate, or spermaceti ointment, spread on lint; and the old skin allowed to remain until a new one is formed under it, when it peels off, and the whole is healed in the course of a few days. The application of blisters, however, is sometimes attended with strangury and bloody urine, which arises from the active principles of the insect being absorbed, and irritating the kidneys and urinary passage. This effect is very much increased if the blister be applied over an abraded surface; and it also occurs if the plaster remain too long applied. These unpleasant effects are most effectually obviated by the patient's drinking freely of diluting drinks, such as compound barley water, linseed tea, and emulsion of gum arabic, and by fomenting the blistered part with warm milk and water, after the removal of the plaster. When we intend to blister the head, it should be shaved ten or twelve hours before the plaster is applied.

Mr. Garden, of Oxford-street, prepares an *Acetum Lyttæ*, which is a liquid, a little of which laid on the part to be blistered by means of a camel-hair pencil, readily raises a blister. This is a very clean and convenient method of blistering.

In some diseases of irritation, particularly in children, the blistered part, instead of healing kindly, becomes a spreading sore; the true skin is destroyed, and the part cannot be healed until the irritability of habit which induced this unpleasant state

is allayed. In such cases, a warm bread and milk poultice should be applied, the denuded surface being frequently bathed with tepid milk and water; while at the same time Peruvian bark is internally administered.

Strengthening Plaster. No. 138.

Take of litharge plaster, twenty-four parts; white resin, six parts; yellow wax, olive oil, of each three parts; red oxide of iron, eight parts. Rub the red oxide of iron with the oil, and adding the other ingredients melted, mix the whole well together.

This plaster is applied with advantage in case of muscular relaxation, and weakness of the joints from sprains, bruises, or other causes.

Corn Plaster. No. 139.

Take of purified ammoniac, yellow wax, of each, two ounces; acetate of copper, six drachms. Melt the two first ingredients together, and, after removing them from the fire, add the verdigris just before they grow cold.

Spread the plaster on some soft leather, or a piece of linen; very carefully pare away as much of the corn with a knife as may be done, before the plaster is applied, which must be renewed in a fortnight, if the corn be not by that time gone. Mr. Samuel Cooper, in his *Surgical Dictionary*, states this to be "infallible."

SYRUPS.

Syrups seldom possess much activity as medicines, and are chiefly employed to render more active remedies palatable. It is, therefore, unnecessary to enter here into any particular consideration of the various syrups found in the shops of druggists; and I shall notice only three or four that are most useful in domestic practice.

Simple Syrup is made by boiling two pounds and a half of refined sugar in a pint of water, until the sugar is perfectly dissolved, when it should be set aside for twenty-four hours, the scum then removed, and the clear syrup poured off. It is used to sweeten various remedies.

Syrup of Opium, of a superior kind, may be made by mixing twenty drops of Battley's Sedative Liquor of Opium with an ounce of simple syrup. This is a useful anodyne for allaying the irritation which keeps up the cough in recent cold, after the inflammatory symptoms are abated, and for easing pain, and procuring sleep, in the diseases of children and delicate

women. It is also of great service in some forms of chronic asthma and habitual cough. To allay the irritation of coughing in adults, the dose is one or two tea-spoonfuls taken occasionally; and to procure sleep or ease pain, one or two table-spoonfuls, or more. One-third or fourth of these quantities is sufficient for children.

Syrup of Senna is made by allowing two ounces of senna leaves, and an ounce of fennel seeds bruised, to digest in a pint of boiling water for twelve hours; then strain the liquor, mix with it three ounces of manna, and a pound of refined sugar, and boil them to a proper consistence.

This is a useful and convenient purgative for children, in doses of three or four tea-spoonfuls or more.

TINCTURES.

Tinctures are spirituous solutions of such of the principles of vegetable and animal substances as are soluble in rectified or proof spirit of wine. Rectified spirit is required in a very few instances only for the formation of tinctures, proof spirit, which is rectified spirit reduced in strength by the addition of water, being adequate for almost every purpose. They are prepared by macerating the ingredients in the spirit in a temperature not exceeding 80 degrees, at which degree, by allowing the menstruum to remain on the ingredients for a sufficient length of time, all the principles that can prove useful in the tincture are extracted, and the solvent saturated. The ingredients must be dried and reduced to a coarse powder, and the maceration made in close vessels, and assisted by frequent agitation. When completely made, tinctures should not be allowed to remain upon the ingredients, but be filtered through bibulous paper, and kept in this state in well-corked bottles.

Ethereal Tincture of Aloes. No. 140.

Take of socotorine aloes, myrrh, of each, in powder, an ounce and a half; English saffron, cut, an ounce; sulphuric ether with alcohol, a pint. Digest the myrrh with the ether for four days in a closed bottle; then add the saffron and the aloes. Digest again for four days, and when the dregs have subsided, pour off the tincture.

This is a warm and grateful stomachic and purgative, and is beneficially employed in indigestion, bilious affections, jaundice, gout, green-sickness, and other cases in which aloes are indicated. The ethereal spirit with which it is made renders it

very grateful, and peculiarly useful in the above disorders when attended with spasm. In doses of a drachm twice or thrice a day, in any agreeable vehicle, it acts chiefly as a stomachic and mild aperient; but purges briskly in larger doses.

Compound Tincture of Benjamin.

See Friar's Balsam.

Compound Tincture of Bark. No. 141.

Take of lance-leaved Peruvian-bark, powdered, two ounces; dried orange peel, an ounce and a half; Virginian snake-root, bruised, three drachms; Saffron, a drachm; cochineal, in powder, two scruples; proof spirit, twenty fluid ounces. Macerate for fourteen days, and filter.

This is the same as the celebrated tincture of Dr. Huxham, and is a grateful stomachic and febrifuge. It is of great service in ague, and low nervous fever. The dose is from one to three drachms, every two, three, or four hours. It may be taken in water, or any other convenient vehicle.

Aromatic Tincture No. 142.

Is composed of cinnamon bark, cardamom seeds, long pepper, ginger root, and proof spirit.

It is a warm aromatic tincture, which is beneficially employed in flatulencies, languor, and gout when it attacks the stomach or chest, and as an adjunct to bitter and tonic mixtures. The dose is from one to two tea-spoonfuls, taken in any agreeable vehicle. It is sold in the shops under the name of *Compound Tincture of Cinnamon.*

Bitter Tincture. No. 143.

Take of gentian root, cut, two ounces; orange peel, dried, an ounce; cardamom seeds, bruised, half an ounce; proof spirit, two pints. Macerate for fourteen days, and filter

This is a valuable stomachic bitter and cordial, of great use in indigestion, bilious complaints, and general weakness. The dose is the same as that of the last tincture. It is the *Compound Tincture of Gentian* of the London Pharmacopœia.

Tincture for Rheumatism. No. 144.

Take of guaiacum, in powder, four ounces; aromatic spirit of ammonia, a pint and a half. Macerate for fourteen days, and filter.

This is a stimulating sudorific and alterative, and is of great service in chronic rheumatism, and at the termination of the

acute species of this disease. It is also of much use in some cases of retention of the menses, and difficult and painful menstruation. In all these complaints, it is given in doses of one or two tea-spoonfuls, twice or thrice a day, taken on sugar, or in the form of draught, when it must be first rubbed with a little yolk of egg, or mucilage of gum arabic, and the necessary quantity of water afterwards added. It is the *Ammoniated Tincture of Guaiacum* of the shops.

Nervous Tincture. No. 145.

Take of Valerian root, four ounces; aromatic spirit of ammonia, two pints. Macerate for fourteen days, and filter.

This is the *Ammoniated Tincture of Valerian* of the Pharmacopœia, and is a very useful medicine in all nervous complaints, as languor, depression of spirits, and hysterics. The dose is one or two tea-spoonfuls occasionally, given in milk and water.

Warm Purgative Tincture. No. 146.

Take of senna leaves, three ounces; carraway seeds, bruised, three drachms; cardamom seeds, bruised, a drachm; raisins, stoned, four ounces; best brandy, two pints. Macerate for fourteen days in a gentle heat, and filter.

This is quite equal to the celebrated *Daffy's Elixir*, and is similar to the tincture of senna of the shops. It is stomachic and purgative, and is very beneficially employed in flatulency, pains in the bowels, gouty habits, and as an opening medicine for those whose bowels have been weakened by intemperance. The dose is from one to two or three table-spoonfuls, in any agreeable vehicle.

Astringent Tincture. No. 147.

Take of extract of catechu, three ounces; cinnamon bark, bruised, two ounces; proof spirit, two pints. Macerate for fourteen days, and filter through paper.

This is a grateful warm astringent, useful in chronic looseness and flux, and all cases in which astringents are indicated. The dose is from one to two tea-spoonfuls, taken in water, or the chalk mixture of the Pharmacopœia.

Tincture of Rhubarb. No. 148.

Take of rhubarb root, sliced, two ounces; cardamom seeds, bruised, an ounce and a half; saffron, two drachms; proof spirit, two pints. Macerate for fourteen days in a gentle heat, and filter.

Equal quantities of this tincture and the tincture of senna,

or the ethereal tincture of aloes, form a warm stomachic and aperient of great service in indigestion, lowness of spirits, and costiveness existing in delicate and enervated habits. This combination is far better than the tincture of rhubarb alone.

STRENGTHENING TINCTURE FOR THE WEAK AND NERVOUS. No. 149.

Take of compound tincture of bark, two ounces; ammoniated tincture of valerian, an ounce; ethereal tincture or compound tincture of aloes, half an ounce. Mix them.

This is a valuable stomachic and strengthening medicine for general debility, lowness of spirits, and nervous irritability. One or two tea-spoonfuls should be taken thrice a day, in milk and water.

TINCTURE FOR THE TOOTH-ACHE. No. 150.

Take of compound tincture of Benjamin, and Battley's solution of opium, of each, half an ounce. Mix them.

A little of this mixture dropped on cotton and applied to the hollow, and along the gum, of a decayed and painful tooth, will afford great, and sometimes effectual, relief.

WATERS BY INFUSION.

COMPOUND ALUM WATER. No. 151.

Take of alum, sulphate of zinc, of each, half an ounce; boiling water, two pints. Dissolve the alum and sulphate of zinc together in the water, then filter the solution.

This is an astringent, cleansing solution, which is beneficially employed as an injection in whites, and as a lotion for cleansing ulcers, and strengthening parts that are relaxed.

GOULARD WATER.—See page 97.

DISTILLED WATERS.

Distilled waters have not much power as remedies, but are generally employed as elegant vehicles only for the exhibition of more active substances.

CINNAMON WATER. No. 152.

Steep one pound of cinnamon bark, bruised, in a gallon and a half of water, and one pint of brandy, for two days; and then distil off one gallon.

This is an agreeable aromatic water, possessing much of the fragrance and cordial virtues of the spice.

Peppermint Water. No. 153.

Take of peppermint leaves, a pound and a half; water, from a gallon and a half to two gallons. Draw off by distillation one gallon.

WINES.

Wine acts upon vegetable substances in nearly the same manner as diluted spirit, dissolving such of their principles as can be taken up by water and spirit when combined: hence it has long been used as a menstruum for extracting the active parts of medicinal vegetables; and the solutions thus formed have been denominated *Medicated Wines.* They should be kept in very well corked bottles, and in a cool situation.

Wine of Aloes. No. 154.

Take of subcarbonate of soda, three ounces; carbonate of ammonia, four drachms and a half; myrrh, in powder, six drachms; extract of spiked aloes, six drachms; Spanish white wine, two pints. Digest them for seven days, shaking the mixture frequently, and then strain.

This is an excellent warm purgative and stomachic, and is of much service in palsy, indigestion, and bilious disorders, green sickness, and gout. The dose is from one to two teaspoonfuls, twice or thrice a day, to act as a stomachic and alterative, and from half an ounce to an ounce occasionally, to produce purging.

Wine of Meadow Saffron. No. 155.

Digest two ounces of the unbruised seeds of the meadow saffron in two pints of sherry wine, for eight days, then filter through blotting paper.

This is one of the best modes of exhibiting the meadow-saffron in gout, inflammatory diseases, and other maladies in which it is useful. For an account of its virtues and effects, see *Materia Medica*, page 54. The dose is from four to ten, or even twenty drops, taken in any agreeable vehicle, and repeated three or four times a day.

OF MINERAL WATERS.

It has been already noticed, that although no natural water is found in a state of absolute purity, yet in general the quantity of foreign matters is not sufficient to give it any very sensible

taste or odour. In some instances, however, these are so considerable, and of such a nature, as to prevent the water forming a part of the nourishment of animals; in which case it is denominated a *Mineral Water*, and can be useful to mankind only in a medicinal point of view.

In the present day, mineral waters are generally arranged into the four following classes: 1. *Saline Purging Waters*; 2. *Chalybeate Waters*; 3. *Sulphureous Waters*; 4. *Acidulous Waters.*

I. The *Saline Mineral Waters* owe their properties altogether to saline compounds; and as they are in the opinion of the present author, more extensively useful than any other kind of mineral water, he considers them worthy of the first and greatest notice. The saline ingredients which predominate, and give their characters to the waters of this class, are chiefly Epsom or Glauber's salt, common salt, muriate of magnesia, and carbonate of soda.

The most celebrated saline purging springs, are those of Cheltenham and Leamington, in England; Pitcaithly, in Scotland; and Seidlitz, on the Continent. They are employed in diseases which require continued and moderate intestinal evacuations; such as indigestion, bilious and liver complaints, low spirits, jaundice, scrophulous swellings, and many anomalous cases of internal obstruction. The powers of the salts they contain are very much increased and modified by the large quantity of water in which they are exhibited, and they, therefore, operate mildly and effectually on the bowels, promoting a considerable discharge from their internal surface, and stimulating the whole of the digestive organs to a more healthy action, without inducing debility. At least, though they may purge briskly, yet they never occasion debility, even in constitutions enervated by previous disease, if they are suited to the case; and should their use weaken the patient, that circumstance is a sufficient proof that they are unsuitable, and ought to be discontinued. In those instances of indigestion and bilious complaints accompanied with constipation, and where the stomach retains a good measure of strength, these waters will often be of more service than almost any other remedy; but if there be real and primary debility of the stomach, they will generally do more harm than good. Cutaneous eruptions and nervous disorders, frequently originate in disorder and obstruction of the digestive organs, in which case they are also taken with great, and sometimes surprising, advantage.

The Cheltenham and Leamington waters require no preparation; but the proper quantity differs in different cases, and can, for the most part, be known only by experience. The

physicians practising in those towns, almost invariably recommend a pint of the water to be taken every morning at two draughts, with an interval of half an hour between each, which time the patient is to spend in walking. This is to be continued for a fortnight or three weeks, when the water is directed to be discontinued for about a fortnight, and then resumed in the same manner, and for the same period as before. This plan will answer in many instances, but some patients will find greater advantage from taking half a pint, or even less, for a month or two without intermission, as in this dose it may be sufficiently powerful as an aperient, will frequently agree better with the stomach and bowels, and prove a more certain and effectual alterative than when taken in larger quantities, with a long interval, as in the first plan. The best time for drinking these waters is the summer; but there is no reason why a sick man should not take them at any season, if they promise him benefit.

In very obstinate chronic complaints, it should never be forgotten, that diseases slow in their progress go off also very slowly; and that, according to the judicious remark of *Celsus*, time is necessary to remove the deep-rooted evils which time has occasioned. Many individuals fail to receive from these waters all the benefit which they are able to afford them, from the want of patience and perseverance.

The water of Pitcaithly and Seidlitz has very nearly the same effects as that at Cheltenham and Leamington, and is, therefore, useful in the same diseases.

2. *Chalybeate Waters* are so called from a Greek word, signifying *iron*, the taste of which is very perceptible in them when fresh from the spring, though they lose it on being exposed for some time to the atmosphere. The reason of this is that the small portion of iron which they contain being kept in solution by *fixed air, or carbonic acid gas*, when this evaporates, the iron sinks to the bottom, forming the fine ochre that lines the channel or water-course. If the iron be in the state of sulphate, however, no sediment falls; and the black colour following the addition of the tincture of nut-galls is produced, even after the water has been boiled and filtered. Iron abounds in almost every part of the earth, and there are, therefore, many chalybeates in Great Britain; but the most celebrated are Tunbridge, Brighton, and Peterhead. The Spa springs also belong to this class. If I mistake not, the Brighton chalybeate is the strongest in this kingdom, but that of Tunbridge is the most celebrated. There is also a spring of this kind at Cheltenham, and at Hartfell, near Moffat, in North Britain.

The water of Tunbridge Wells is found, upon analysis, to

differ from that of common springs only by containing in every gallon a grain of iron, suspended by about three table-spoonfuls of fixed air, or carbonic acid gas. Yet its medicinal effects are sometimes very considerable. Through its operation on the stomach, it gives a gentle stimulus to the relaxed nerves and muscles, and contributes to restore their proper tone. It affords great relief in indigestion, and other complaints of the stomach, especially when there is real debility of that organ; in flatulencies, bilious vomitings, scrophula, and other consequences either of debility or intemperance. It promotes the circulation of the blood, and the various secretions, but more particularly that of urine; and this latter circumstance is one of the best proofs of its agreeing with the habit of the patient. In short its natural tendency in the cases to which its stimulant and tonic powers are adapted, is to raise the spirits, and increase the general vigour of the functions.

The Tunbridge waters are eminently serviceable in the disorders peculiar to females, arising from great weakness or derangement of the uterine system; such as an immoderate flow of the *menses*, green sickness, whites, and other similar indispositions, which are not only relaxing and painful in themselves, but are often the causes of abortion, or of sterility. If, however, the profuse flow of the *menses* occurs in strong, full habits, and is accompanied by feverish symptoms, pain in the back, and local irritation, the stimulus of the waters will most likely prove injurious. Indeed, in all cases of disease, chalybeate waters are, for the most part, adapted to the cure only of such as occur in delicate persons, of a thin habit, and pale complexion, they being very generally improper in all inflammatory cases.

In all obstructions of the urinary passages, and other complaints in that region, as seminal weakness, mucous discharges, &c. these waters are frequently found of singular efficacy; and they may be prescribed with great probability of success in such chronic disorders as arise from slow beginnings, and are attended with great laxity and weakness of the solids, but without much organic disease.

Some caution is necessary in using these waters. Persons of rather a full habit should take one or two active purges before commencing with the chalybeate water; and when the stomach is foul, either a purgative or an emetic should be previously exhibited. What the immediate effect of the waters may be, can only be known by a trial. They often purge very briskly at first, but this effect soon ceases; and as their continued use has some tendency to occasion costiveness, gentle opening medicines from time to time are necessary. Sometimes giddi-

ness, a heaviness of the head, nausea, vomiting, or a sense of fulness over the whole body, will be felt on beginning the course, but they will disappear after a short time. It is only when they stubbornly continue, that they should be regarded as a proof that the waters are not suited to the nature of the complaint, or to the patient's constitution. The nausea, or sickness, being often occasioned by the coldness of the fresh-drawn water, acting on an empty, or a very weak and irritable stomach, it is advisable, in the first instance, not to drink it fasting, till the stomach becomes gradually reconciled to it; and in case of extreme irritability, it is a common and judicious practice at Tunbridge to immerse in hot water a bottle filled with the chalybeate, and well corked, that the chillness may be diminished with as little evaporation of the fixed air as possible.

As all the spa waters are chalybeate, they are of course useful in the same diseases as those of Tunbridge, and should be taken in the same manner.

3. *Sulphureous Waters* derive their character chiefly from sulphureted hydrogen gas; which in some of them is uncombined, while in others it is united with lime or an alkali. They are transparent when newly drawn from the spring, and have the fœtid odour of rotten eggs, which is gradually lost from exposure to the air, and the water becomes turbid. They generally contain muriate of magnesia, or other saline matters, which modify their powers as a remedy.

The most important sulphureous springs in this island are those of Harrowgate, Kilburn, and Moffat; on the Continent, Aix-la-Chapelle and Barege.

They are resorted to chiefly for the cure of cutaneous eruptions, chronic rheumatism, scrophulous obstructions, hypochondriasis or low spirits, costiveness, and piles. But being a powerful, yet mild alterative, they are frequently of the greatest service in every kind of internal obstruction, and chronic disease, since they gently move the bowels, determine to the surface of the body, promote the excretion of urine, and strengthen the digestive organs. They operate more mildly than the best mercurial alteratives, and will frequently cure obstinate chronic maladies which have resisted the use of mercury.

Those who wish for the cure of any obstinate disease from the use of the Harrowgate, or any other sulphureous water, ought to take it in such a manner as to produce a daily exoneration of the bowels without purging. With this view, a half-pint glass may be drank at bed-time, and the same quantity an hour before breakfast and dinner. The dose, however, must vary according to circumstances. Even the quantity just men-

tioned will purge some persons, in which case it should be lessened, while others will drink twice as much without being in the least moved by it. Its operation on the bowels is the only standard for using the water as an alterative. In those few cases where the water is intended to purge, in consequence of the patient's complaint requiring a strong determination to the bowels, it may be necessary to drink a pint or two before breakfast.

When they purge, they do not irritate the nerves or weaken the patient so much as other purgatives. At first, they are very nauseous to the taste, but after a little use they, at least to many persons, become much less so.

During the course of these waters, full, heavy meals, and especially hearty suppers, must be carefully avoided. The stimulus of water impregnated with sulphur and salts often increases the desire for food, and in some measure creates a false appetite; but this craving appetite cannot be satisfied without great injury and inconvenience to the patient. The proper diet in these cases is one of a light, nourishing, and rather diluting description. Gentle exercise should be taken at the same time, either on foot, or horseback, and agreeable company and conversation are highly advisable. Exercise promotes the operation of the waters, and carries them through the system; and every thing that tends to exhilarate the spirits, not only increases the efficacy of the waters, but acts as a medicine.

The Harrowgate waters are used externally as well as internally, and in this manner are considered a powerful auxiliary in many of the disorders for which they are resorted to, particularly in cutaneous eruptions. There are proper baths for this purpose, to the supply of which three springs out of four are devoted; that which is reserved for drinking being more strongly impregnated with salt and sulphur than the rest.

The sulphureous waters of Moffat, in North Britain, are almost as much resorted to as those of Harrowgate, but are not so strongly impregnated. Both these waters are cold, but those of Aix-la-Chapelle and Barege are hot, which in some instances gives them a preference over those in Great Britain. The temperature of the waters of Aix-la-Chapelle is about 130 degrees, and their celebrity is very great and of ancient date. It appears that Charlemagne resided for a long time at Aix, and took so much delight in the use of the waters, as frequently to hold his levee in the bath, with all his attendants.

4. *Acidulous Waters* owe their properties chiefly to carbonic acid. They sparkle when drawn from the spring, or when poured into a glass; have an acidulous taste, and become vapid when exposed to the air. Beside free carbonic acid, on the

presence of which these qualities depend, acidulous waters generally contain also carbonate of soda, of lime, of magnesia, and of iron; and sometimes common salt. There are *warm acidulous waters*, and *cold acidulous waters*; the temperature of the former, however, does not generally exceed 72 degrees, while that of the latter is about 55 degrees. There is one great exception to this rule, *viz.* the Carlsbad water, which has a temperature of about 160 degrees.

The most celebrated springs of this class are Pyrmont, Seltzer, Spa, and Carlsbad. They are tonic and diuretic; and in large doses produce a sensible degree of exhilaration. They all afford a grateful and moderate stimulus to the stomach: but the Pyrmont, Spa, and Carlsbad, containing carbonate of iron, are especially useful in all cases of impaired digestion; while those which contain alkaline carbonates, as the Carlsbad and Seltzer, are more particularly employed as palliatives in red gravel and stone.

There are other mineral waters in this kingdom which enjoy a considerable share of popularity, such as Bath, Bristol, Matlock, and Buxton; but as their virtues depend almost entirely on temperature, and they are as much used externally as internally, and some of them more so, I shall defer adverting to their internal use till I come to detail their virtues and uses as baths.

OF COLD AND WARM BATHING.

This important branch of physic is of excellent use and efficacy, both in the prevention and cure of diseases. Though the ancients could less dispense with the use of the bath, on account of the frequency of their athletic exercises, as well as from the want of linen, which was then much less in use than at present, yet in our times it would be of great service if the use of baths were more general and frequent, and this beneficial practice not confined to particular places or seasons, as a mere matter of fashion. Considered as a species of universal domestic remedy, as one which forms the basis of cleanliness, bathing, in its different forms, may be pronounced one of the most extensive and beneficial restorers of health and vigour. And they are often of the greatest service in the cure, as well as in the prevention of diseases. But their utility much depends on a clear and accurate knowledge of the properties and effects of the different baths, and on their correct application to the state of the patient's constitution, and the nature of his disease; and it will, therefore, be necessary for me to notice the two principal classes, *viz.* the *cold* and the *warm* bath, separately.

The sick and valetudinary should remember, that the effects of bathing are not the same in all conditions of the system, but derive their character more from the varying circumstances of the patient, than from any intrinsic properties they may possess of universal activity. Heat and cold are neither strengthening nor debilitating in themselves, but become so, merely in consequence of certain states of the body at the time of their application. The same application which in a strong person produces increase of strength, may tend immediately to debilitate the feeble; and that which is a stimulant when used with moderation, becomes rapidly destructive to vital power in an excessive dose. I may here add, that the uniformity of temperature in the human body is sustained entirely by the vital powers, and the process appears to be carried on with the least expenditure of force, when the atmospheric air indicates 60 degrees. Every material deviation from this point, whether by increase or diminution of temperature, *if long continued*, draws equally upon the constitution, and produces relaxation proportionate to the extent and duration of the cause; so that, *in this sense*, both heat and cold are directly debilitating powers to the human constitution. These facts prove, that neither the cold nor warm bath should ever be resorted to by those who are in ill health, without the advice of some considerate and able professional man.

OF COLD BATHING.

The sensible properties of the cold bath in general, consist in its power of contracting the solid parts of the body, which contraction is followed by a general re-action, indicated by a salutary glow of the whole surface. Any part of the body which is exposed to the sudden contact of cold water, experiences at the same instant a degree of tension and contraction, and becomes narrower and smaller. Not only the larger blood-vessels, but likewise the small capillary tubes, are liable to this contraction and subsequent relaxation. The application of cold, when made to suitable habits, and proper states of the constitution, is evidently attended with an immediate tonic effect, from the general glow which takes place through the whole body, and the accompanying feeling of renewed strength, which indicate an increase of action, of a salutary nature, in all the vessels of the system; and this increased vigour of action is a test of the propriety of the application of cold, and explains the manner in which it is beneficial. It shews that the nerves, blood-vessels, and all the organs of the body, are excited to a more healthy and energetic performance of their

functions; and when this re-action does not take place, the failure is a sufficient proof of such a weakness, or other state of body existing, as precludes the further employment of the cold bath.

Cold bathing is of the greatest service in all disorders originating in, or connected with, simple weakness and relaxation, that is, in debility unaccompanied with any disease of structure or positive injury in any important organ. In the scrophulous complaints, and general weakness of children, in the debility and languor following fever, intense study, sedentary occupations, grief, or debauchery, it is often employed with the best effects, since the debility in those cases directly arises, for the most part, from unhealthy habits, depressing passions, or the long continuance of a feverish action, when the cautious application of cold proves bracing and very salutary. But in case of positive injury to the structure of some important organ, the employment of cold is always improper; it is too great a shock to the system and the diseased part, and the patient is then benefited only by the use of warm bathing. Indeed, in complaints which call for the use of the cold bath, it is generally an excellent practice for the patient to commence with tepid bathing at about 90 or 93 degrees, which he may resort to three or four times or more for the first week or two, and then try the cold bath. This is particularly advisable where the weakness of the patient is extreme, or the causes of the debility have been a long time in operation.

Whatever may be the disease for which it is resorted to, every cold bath applied to the whole body, ought to be of short duration, since all depends upon the first impression the cold makes on the skin and nerves. The head should be always first wetted, either by immersion, or by pouring water upon it. The immersion ought always to be sudden, not only because it is less felt than when we enter the water slowly and timorously, but likewise because the effect of the first impression is uniform all over the body, and the blood in this manner is not propelled from the lower to the upper parts. Hence the shower bath possesses great advantages, as it pours the water suddenly upon the whole body, and thus in the most perfect manner fulfils the three rules above specified. Gentle exercise ought to precede the cold bath, to produce some re-action of the vascular system on coming out of it, for neither complete rest nor violent exercise are proper, previous to the use of this remedy.

The morning or forenoon is the most proper time for cold bathing; and while in the water the bather should not remain inactive, but move about, in order to promote the circulation of the blood from the centre of the body to the extremities. After

immersion, the whole body ought to be wiped quickly with a dry and rough towel, and moderate exercise in the open air is proper, and indeed necessary.

In the following cases the cold bath is altogether inadmissible. In a general plethora, or full habit of body, and in the febrile disposition which attends it. 2. In active hæmorrhages, or fluxes of blood, that is, bleedings, attended with a quick, hard, full pulse, and other signs of an inflammatory tendency. 3. In every kind of acute inflammation. 4. In diseases of the breast, difficult breathing, and short and dry coughs. 5. In gouty and rheumatic paroxysms. 6. In most diseases of the skin. 7. In a state of pregnancy. 8. In palsy. In indigestion it is also generally hurtful, at least in the commencement of the treatment; and wherever it occasions chillness, loss of appetite, languor, pain of the breast or bowels, or violent head aches, it ought to be discontinued. These unpleasant sensations are the surest proofs, that the actual state of the patient's habit is unfit to bear the shock; and that either the re-action of the heart and arteries is too weak to overcome the cold pressure on the surface, or that the determination to the head, or some other vital part, is too rapidly increased.

In general, the best method of cold bathing is in the sea, or a river; but there are not a few instances in which the shower bath merits a decided preference, and this is especially the case where there is a determination of the fluids to the head. Although the shower bath does not cover the surface of the body so universally as the usual cold baths, this circumstance is rather favourable than otherwise, for those parts, which the water has not touched, feel the impression by sympathy, as much as those in actual contact with it. Every drop of water becomes a partial cold bath in miniature, and thus a stronger impression is excited than by any other mode of bathing. The shower bath, for the following reasons, possesses advantages superior to all others. 1. The sudden contact of the water, which in the common bath is only momentary, may here be prolonged, repeated, and modified at pleasure. 2. The head and breast, which are exposed to some inconvenience and danger in the common bath, are here effectually secured, by receiving the first shock of the water; the blood is consequently impelled to the lower parts of the body, and the patient feels no obstruction in breathing, or undulations of blood towards the head. 3. The heavy pressure on the body, occasioned by the weight of the water, and the free circulation of the blood in the parts touched by it, being, for some time at least, interrupted, is an unfavourable circumstance in certain instances. The shower bath, on the contrary, descends in single drops,

which are at once more stimulating and pleasant than the immersion into cold water, and it can be more readily procured, and more easily modified and adapted to the circumstances of the patient.

A proper apparatus for giving the shower bath is to be had at the tin shops, but where a saving of expense is an object, it may be effectually supplied by the following easy expedient: Fill a common watering pot with cold water, let the patient sit down undressed upon a stool, which may be placed in a large tub; and let the hair, if not cut short, be spread over the shoulders as loosely as possible; then pour the water from the pot over the patient's head, face, neck, and shoulders, and all parts of the body down to the feet, till the whole has been thoroughly bathed. Let him next be rubbed dry, and take gentle exercise, as has been already recommended, till the sensation of cold be succeeded by a gentle glow all over him.

When this kind of bath is first resorted to, it may be used gently, and with water having some degree of warmth, so as not to make the shock too great; but as the patient becomes accustomed to it, the degree of cold may be increased, and the water may be allowed to fall from a greater height, so as to make the shower heavier.

The external use of cold water is often of singular benefit in the commencement of fevers, in sprains, old swellings, and rigidity of particular parts, in which cases it may be applied directly to the affected part, and its employment continued for almost any length of time.

Before quitting this subject, I would make a few remarks upon the impropriety of plunging into the cold bath after the body has been greatly heated by exercise. It may be safely asserted, that in the earlier stages of exercise, before profuse perspiration has dissipated the heat, and fatigue debilitated the living power, the cold bath is generally safe and useful; on the contrary, nothing is more dangerous than for a person to go into the cold bath after exercise has produced great perspiration, and terminated in languor and fatigue. The reason of this is sufficiently obvious. In the first case, the exercise is short of fatigue, being just such as produces an increased action of the vascular system, with some increase of heat, and thus secures a force of re-action under the shock, which otherwise might not always take place: in the second instance, where the person waits till he is perfectly cooled, and some degree of languor follows as a necessary consequence, the heat is not only sinking rapidly, but the system parts more easily with the portion that remains, and on plunging into cold water,

a sudden chillness is felt which is alarming and extremely dangerous. So that were an individual compelled to go into cold water after very active exercise, he had far better go in *when hot* than *when cooling after having been heated.*

OF WARM BATHING.

The cold bath is water at a temperature below 85 degrees; from 85 to 95 degrees is usually called the *tepid* bath, and from 95 to 98 degrees it is a warm bath. When the temperature of the water exceeds 98 degrees it is a *hot* bath, which is seldom used above 105 degrees. From 100 to 130 degrees is the *vapour* bath, which degree could not be endured in the condensed state of water.

The tepid and warm baths are sedative. They excite the sensation of heat, lessen the frequency of the pulse, relax powerfully the skin and simple solids, diminish increased excitement, and prove very refreshing. The effects of the vapour bath are nearly similar, but it acts with much greater power than water in the liquid form. The hot bath is stimulant; it augments the action of the heart and arteries, renders the skin red, quickens respiration, and produces a copious flow of sweat. These effects prove that a *hot* bath would be very improper in any case of acute inflammation; though a *warm* bath might then be very serviceable.

The Tepid Bath

Is applicable to all the diseases to which the cold affusion may be applied, and is generally preferred when there is any doubt of the strength being sufficient to re-act, after a cold immersion. It possesses very considerable efficacy in reducing the general excitement, and in lowering, and lessening the frequency of the pulse in fever; it is safe, in a high degree grateful, and may be extended to almost the whole class of febrile diseases, such as typhus, scarlet fever, small pox, &c. It is of great service in pregnancy and infancy. In the former case, it induces a pliability of fibre, which, by diminishing resistance, lessens the pains and danger, and shortens the period of actual parturition. To those women who are liable to tedious and painful labours, it presents a resource equally efficacious and grateful, which should be resorted to for four or five months before the expiration of their time. During the time of puberty, that is, for about two years at that period, sea bathing should be avoided, both in the case of boys and girls; but the tepid bath may then be used with great advantage.

It is often of eminent utility in indigestion, bilious and liver complaints, in the debility brought on by a long residence in a hot climate, in languor, and extreme weakness occurring in persons of a delicate habit, for the pains and stiffness accompanying chronic gout or rheumatism, and in all cutaneous eruptions. It is likewise usefully employed as an introduction to the use of the cold bath.

The practice of pouring cold water upon the head while the body of the patient is immersed in the tepid bath, is frequently resorted to with manifest benefit in insanity, and threatened apoplexy. In the latter disease, cupping and the exhibition of purgative medicine, may be beneficially employed with it.

Tepid bathing is particularly indicated in old age, the chillness, stiffness, and debility of which state, it is well calculated to lessen and remove. Franklin, Darwin, and other eminent philosophers, speak in high terms of the benefit they received in their advancing years, from the frequent use of the tepid bath.

The best time of using it is in the morning, any time between ten and one o'clock, and gentle exercise should be taken afterwards. In general, the period of immersion should not be less than twenty minutes, nor exceed one hour.

The Warm Bath

Is efficaciously employed in acute rheumatism, inflammation of the abdominal viscera, of the kidneys, bladder, and womb; in suppression of urine, and in the convulsions, and other spasmodic diseases of infants, arising from teething, and other irritations. It may also be applied with safety and efficacy in most diseases of the skin; in green sickness; in slight cases of palsy; in Saint Vitus's Dance, and other spasmodic and convulsive affections, where the cold bath might prove too violent; in costiveness, intestinal obstruction, and other complaints of the bowels that seem to depend on an irregular or diminished action of any part of the alimentary canal; and in cases of debility attended with nervous irritation. In all cases in which the constitution is injured, and a general state of debility induced either by mercury, previous illness, intemperance, late hours, irregularity in diet or exercise, warm bathing is found to produce considerable advantage, when pursued under proper restrictions; and sometimes, in such instances, it is continued for a considerable time with great benefit, at other times, it is properly employed as a preparation for the cold bath. Delicate, weakly, and nervous women, who may have suffered from miscarriages, and the long train of complaints consequent to such accidents, as sexual weakness,

attended with pain in the back and loins, &c. will not be disappointed in their expectations of relief from warm bathing.

When the warm bath is intended to produce increased perspiration, it is best employed in the evening, when the immersion should not exceed ten minutes, and the patient be removed from the bath to a warm bed. When it is not intended to excite perspiration, any time, from an hour after breakfast till dinner, will be proper: in these cases, the bathing may be protracted to 15 or 20 minutes, according to the feelings of the patient. Gentle exercise, in the open air, should afterwards be employed.

The Vapour Bath

Is recommended in the same diseases as the warm bath, and will sometimes succeed in producing the effects wished for, after warm bathing has failed. In using the vapour bath, the power of heat is modified and tempered by the moisture diffused through the air; and as the elastic vapour, like air, is a less powerful conductor of heat than a watery fluid, the effect of vapour in raising the temperature of the body is much less than that of the hot bath. Its immediate effects are to excite or increase the action of the superficial arteries, by which the determination of blood to the deeper-seated parts is diminished. Therefore, the utility of this application is obvious in all cases of internal inflammation, since it draws a great quantity of blood to the surface, and relieves the internal parts by the secretion of the skin, which is the mode nature takes to resolve inflammations and fevers. These effects render it of great advantage in inflammatory fevers, inflammation of the bowels, stomach, &c. liver complaints, dropsy, obstinate rheumatic attacks, scrophulous and glandular swellings, gravel, palsy, and gout. The vapour bath may be applied to the whole body, or to any part of it.

The best time for using it is the morning, or before dinner. From ten to fifteen minutes is generally sufficient time for the patient to be exposed to the vapour; but there may be cases where half an hour or an hour will be necessary. After the body is properly dried, and rubbed, the cool air is perfectly safe.

The Air-Pump Vapour Bath

Must not be lost sight of in this place. It consists of an apparatus capable of conveying vapour to a diseased limb, to which apparatus an air-pump is firmly attached for the purpose of exhausting the machine, when the fumigation has continued the proper time. This air-pump vapour bath has been found of signal service in gout, rheumatism, palsy, contractions of the

muscles, cutaneous diseases, and other complaints of a chronic kind, in many instances of which it evinces a remarkable power in altering the condition of action in the vessels and nerves of the affected part, and in so arousing its impaired energies as to prove of great assistance in restoring it to a healthy state. That it must possess a very considerable power in many obstinate diseases, is, I think, evident from the fact, that it combines the effect of the most efficacious fomentation and dry cupping: for it conveys the soothing vapour to the diseased part, and retains it there, of a uniform temperature, as long as is necessary, and then, by exhausting the air, removes all pressure from the surface, so as to occasion a temporary expansion of the vessels, thus affording an opportunity and assistance to the resolution of obstructions. This will appear more clear, when we consider that the pressure of the air on the body is very great, being equal to about fifteen pounds weight on every square inch of surface,* and the temporary removal of this enormous pressure from a diseased limb, cannot but prove an effectual means in numerous instances, of promoting a renewed and vigorous circulation, of resolving obstructions, loosening contractions, and relieving pain in the part to which the apparatus is applied.

Mr. La Beaume states the sensations experienced by the patient during the process of fumigation, to be of the most agreeable nature, and that even in painfully acute disorders, as gout, &c. the feelings, while under the operation, are soothing, exciting gradually and gently an inclination in the patient to sleep.

Persons in, or near London, who wish to try this remedy, cannot do better than avail themselves of Mr. La Beaume's (of 31, Southampton Row, Russell Square,) skill in using it. Those in the country may readily obtain full directions as to the mode of procuring and applying it, by writing to that gentleman, who has paid particular attention to this subject.

Of the Hot Baths of Bath, and the Tepid Baths of Bristol, Matlock, and Buxton.

The *Bath Waters* are very efficacious in strengthening the bowels and stomach, bracing the relaxed fibres, and invigorating

* It is a generally received opinion among philosophers, that the total amount of pressure on the whole surface of an ordinary man's body is equal to 32,000 pounds. This enormous pressure would crush us instantly, were it not exactly counterbalanced by the spring of the air, or other elastic fluid from within, diffused through every part of our bodies; just as the pressure on the surface of a shrivelled apple, is accurately counterpoised by the elasticity of the air contained in its pores. Now this is proved by experiment, for if a shrivelled apple be placed under the receiver of an air pump, we find that as the air is exhausted, the wrinkles on the apple gradually disappear, and its surface becomes plump and turgid. These facts serve to illustrate the mode of operation, and the utility, of the air-pump vapour bath.

the circulation. In bilious disorders they are by some persons considered specific; and certainly prove serviceable in many nervous, paralytic, rheumatic, and gouty complaints. They are attended with good effects in the green-sickness, particularly before any considerable affection of the stomach takes place, or any feverish symptoms appear; in obstructions of the viscera, when the consequences of ague or of long residence in hot climates, if the disorder in these instances has not advanced too far; in the colic, especially the painter's or Devonshire colic; in the jaundice, when arising from simple obstruction of the biliary ducts; in spasmodic affections of the womb, and painful menstruation; and in many cutaneous, but more especially leprous eruptions. In gouty cases, they are most useful in that stage of the complaint, when the inflammatory symptoms, if any have preceded, have in a good measure abated, and a degree of weakness and want of tone in the system begins to take place. They are said to be also serviceable in morbus coxarius, or the hip disease, and in white swelling of the knee. Upon the whole, these waters are often a powerful, but, in many instances, a nice remedy, and should therefore, seldom be resorted to without the advice of an able physician.

They are unquestionably prejudicial in all scirrhous and other positive diseases in the lungs, and abdominal viscera; and they do not appear suited to cases of palsy occurring in persons of a full habit.

The Bath water when drank fresh from the spring, has, in most persons, the effect of raising and rather accelerating the pulse, increasing the heat, and exciting the secretions. The action on the nervous system is felt at the same time, so that the stimulating properties of the water are very diffusive; and what is further remarkable, though these symptoms come on suddenly, yet they often continue much longer than we can suppose them to be excited by the actual presence of the water in the body.

This water not only promotes urine and perspiration, but also the salivary discharge; and quenches thirst better than any other fluid, in cases where there is no tendency to fever. If any disposition of this kind should appear, a hot stimulant would be evidently improper.

This account of the primary and immediate effects of the water used internally, will enable any patient to judge from his own feelings, whether it agree with his constitution or not. If it excite, on being first taken, a pleasing glow in the stomach, followed by an increase of spirits and of appetite, particularly for breakfast, and above all, a rapid determination to the kidneys, there is the greatest probability of its proving service-

able. But if it occasion head-ache, thirst, and dryness of the tongue; if it sit heavy on the stomach, or produce sickness, and do not pass off by urine, or perspiration, it may be fairly concluded, that its continuance would do injury, unless these symptoms can be removed.

In their external application, these waters unite all the medicinal advantages of warm baths, from about 106 degrees of heat to any inferior degree that may be desired, and the permanence and uniformity of their warmth are no unimportant recommendations. Some physicians seem to consider that they possess some further powers and specific qualities, superior to those of common water of the same temperature, and certainly there are many facts to countenance such an opinion. They observe, that their action on the nervous system is more stimulating than a common warm bath; that they raise the pulse and heat the body to a higher degree, yet are much less apt to produce a violent perspiration; that they remarkably increase the urinary discharge; and that so far from causing any relaxation or weakness, the bathers are observed to be in general more alert and vigorous, and to have a better appetite on the days of bathing than in the interval.

In drinking this water, the safest method is to begin with a glass containing about a quarter of a pint, before breakfast; and to judge from its effects how often it may be repeated, or the quantity enlarged. If it feel easy, warm, and cordial, to the stomach and spirits, and excites no pain or sense of fulness in the head or eyes, a second glass of the same size may be taken the same day at noon, and this quantity gradually increased to a pint in the day, taken at two or three times, as convenience may suit. This is deemed a proper medium for the generality of people, though, in some cases, where the habit is not very irritable, the daily allowance may be augmented to a pint and a half, with safety and benefit. The Cross Bath Water, the temperature of which, when fresh from the spring, is 112 degrees, is usually recommended at the commencement of a course, especially when there is any affection of the head, or when any tendency to plethora appears in the system. After some time, the more powerful water of the King's or the Hot Bath, which is four degrees higher in temperature, may be used; and this change will prevent, in some measure, the disgust which is apt to come on after a long trial of the Bath waters.

No less regard should be paid to the proper use of the bath. A short stay of five or six minutes is most advisable at first; and if this trial produces no symptoms that are disagreeable, but on the contrary, seem to improve the health, spirits, and

strength, a longer stay may be gradually indulged, till it comes to half an hour, but never so long as to cause lassitude, faintness, or disgust. The choice of the baths is often a matter of importance, as there is still a greater variation in the temperature of the waters when in the baths than at the pumps, the waters in the King's or the Hot Bath, being from eight to twelve degrees warmer than those in the Cross Bath. There are also private baths of any temperature to suit the peculiarities of every patient's habit or complaint. The best time in general for bathing is the morning; and it may be repeated twice, or at most thrice a week.

The Hot-well Water, near Bristol. Of the four principal warm waters naturally produced in England, this is the least so, excepting that of Matlock, the temperature not exceeding 74 degrees. As the Bath waters are proper where the secretions are defective, so the Bristol water is of service where they exceed the requirements of health. The Bath water warms; the Bristol cools. The former helps the stomach, intestines, and nerves; the latter favours the lungs, kidneys, and bladder. The diseases in which this water is useful are internal bleedings, immoderate flow of the menses, spitting of blood, dysentery, consumption, gravel, and stone, scrophula, and diabetes, in the last of which it is sometimes of eminent utility, and may be drank as freely as the thirst requires it. It is well adapted to relieve the various symptoms of diabetes; such as the constant thirst, the impeded respiration, the dryness and frequent desquamation of the skin, the feverish quickness of the pulse, and the preternatural discharge of urine. A regular course of the Hot-well water has been found to moderate this almost unquenchable thirst; to keep the skin moist and perspirable; to allay the fever; and to render the urinary organs fitter to receive benefit from the medicines usually prescribed to remove their debility, and that of the system in general. In many cases, a little gentle aperient medicine may be used at the same time, if the bowels are not moved without.

A few years since, this water was in high reputation for curing the incipient symptoms of consumption, and affording considerable relief in the more advanced stages of this malady; but latterly it has been much less thought of. It is, however, agreeable to the palate, and the effects it produces are very gradual and somewhat pleasant, and, therefore, it will sometimes be of use to the consumptive, and is not likely ever to be injurious.

This water is not made use of to bathe in, being only used internally. The hotter months are the best for using it; and the full dose is half a pint, which is to be drank early in the

morning and repeated before breakfast, at the interval of at least half an hour, spent in gentle exercise. Two more doses of the like quantity, and with the like interposition of active amusement, are to be taken between breakfast and dinner, at the longest distance from each of these meals. But particular habits and complaints require variations in the quantity to be taken of this, as well as of any other mineral water. This water is also used at table and for domestic purposes; but in consequence of its altered temperature, and of the loss of the fixed air it contained, it cannot be in so high a state of medicinal perfection as when drank fresh from the spring.

The Bristol and Matlock waters are nearly of the same qualities.

The Buxton water has a temperature of about 82 degrees, and is highly and justly esteemed for its excellent effects in indigestion, low spirits, and every kind of weakness and disorder in the digestive organs; and in many complaints which originate in the derangement of the functions of these very important parts, such as gravel and stone, flatulency, what are called bilious disorders, gout, chronic rheumatism, and some cutaneous eruptions. It is also beneficially employed in diabetes, bloody urine, contractions of the vessels and limbs, especially from rheumatism, and old age, and painful affections of the kidneys and bladder. In all these maladies, it is employed both internally and externally.

This water has a sweet and pleasant taste; and contains calcareous earth, together with a small quantity of sea salt, and no inconsiderable portion of a purging salt. It warms the stomach and intestines, relieves the sensations of pain, sinking and oppression, so common in deranged states of these organs, determines to the surface of the body, and creates a comfortable glow through the whole frame. Whatever may be the disease for which it is used, it is generally advisable to keep the bowels regularly open by means of some gentle medicine, if the water does not produce a laxative effect, which it sometimes will without the aid of medicine, and which is always salutary. The dose is about a pint taken at two or three draughts, before breakfast, and the like quantity before dinner, in the same manner.

The Buxton bath is well suited to languid, enfeebled, and irritable habits, as the slight shock which follows immersion is almost immediately succeeded by a pleasant glow all over the body. It may be used in the morning, three or four times a week.

OF DIET.*

All food is either of animal or vegetable origin. The former is, no doubt, more allied to our nature, and most easily assimilated to our nourishment; the latter, though digested with more difficulty, is the foundation of the former, as vegetables are the nourishment of animals, and all food is, therefore, properly derived from this source. In many respects, however, vegetable and animal food differ, and this difference it is proper to remark, according to the various effects it displays on different parts of the human system. The first difference to be observed between vegetable and animal food, is with respect to their effects on the stomach and bowels. In the stomach, vegetable food always displays a tendency to acescency, while animal food, on the contrary, tends towards putrefaction. Hence the former is apt to produce symptoms of uneasiness, while the latter in moderate quantity is almost never felt. In the same way, facility of solution belongs to vegetable food; while from greater firmness of texture, and viscidity, animal food is a much longer time under the action of the digestive organs. The latter does not always mix easily in the stomach with other matter; while vegetables unite readily, but frequently continue long on the stomach for want of a proper stimulus. Effects similar to what take place in the stomach are also produced in the bowels by these different kinds of food. The acescency of vegetable food is at all times apt to induce looseness; while the same effect is never known to arise from animal food, except in a very advanced state of putrefaction.

The combination of a vegetable and animal diet is certainly best suited to preserve a perfect state of health and strength. There are few who subsist entirely on vegetables, and of these few, the constitutions are generally feeble, sickly, and weak. In hot climates, a vegetable diet may be carried to a great extent without injury; while, on the other hand, some northern nations live almost entirely on animal food, and in a very cold atmosphere, this may be indulged beyond what would otherwise be safe for the health of the body, so that a mixture of vegetable and animal nourishment appears best fitted for the health of mankind in general.

* The subject of Diet and Regimen is a very important one, and therefore I have been desirous of compressing into these pages as much valuable information relating thereto as possible, but as the space here allowed for these articles is necessarily limited, I beg to refer the reader, who is seeking for a more detailed account of the subject, to my small Treatise, entitled "*Sure Methods of Improving Health by Regulating the Diet and Regimen.*"

In the consumption of food we are liable to commit errors, both as to its quantity and quality. The error in the quantity, however, is generally the most detrimental. A small portion of food can be better digested, and more easily changed into chyle, or that alimentary fluid from which the blood derives its origin, than a large portion, which injures the coats of the stomach, and prevents them from exerting their full force. Hence every excess is injurious. It is in infancy, and early age, that the foundation is laid for many diseases arising from indigestion, which are now found in every family. If children are fed immoderately, and beyond the real wants of nature, the digestive organs become too much distended, and the stomach by degrees acquires an unnatural craving for food, which must be satisfied whatever be the consequence. These excessive supplies are not only unnecessary, but produce the most serious and fatal disorders. It should never be forgotten, that we are not nourished, as Mr. Abernethy was wont to say, by what we eat, but by what we digest. Nature is easily satisfied, and is always best provided when we do not intrude upon her more than a small quantity of the most digestable animal and vegetable food, at regular intervals of four hours, through the day.

In regard to the quantity of food to be actually taken, it should be observed, that this must be regulated much by the appetite, the supply required, and the state of health of the individual. The appetite is, in general, the great indication of health; and where the stomach is in a healthy state, it relishes almost every kind of ordinary nourishment that is presented. This being the case, we are to be regulated in a great measure in the quantity taken, by the appetite, a due regard being paid to the supply necessary, and the state of the system as it respects health or disease. Satiety is the natural consequence of repletion, and before this takes place, the stomach itself gives the alarm. The strong, robust, and active, require a larger quantity of food than the weakly, delicate, and sedentary; infants need less than children, and children than adults; and the aged ought to lessen their quantity of solid aliment in proportion to their age, and the strength of their digestive functions. Women, in general, call for much less food than men, and all persons should take a smaller quantity in the relaxing days of summer, than during the cold of winter. It may be remarked, also, as a general rule, liable but to few exceptions, that the quantity of food taken should be much less in a state of disease than in health, and this applies equally to acute and chronic diseases. Disease and weakness are necessary and invariable concomitants, and it is a common

and dangerous error among patients to suppose, that by increasing the quantity of their food they shall augment their strength, and become better able to throw off their disease; for the reverse is the truth. In all bodily complaints the digestive organs are much affected, and in the majority they are chiefly and primarily concerned; they are, therefore, for the most part, in a state of considerable irritation and debility, and by increasing the quantity of food, beyond the small supply which they can then bear with ease, this irritation is strengthened, and with it the existing malady. On the contrary, by carefully regulating our supplies of aliment under such circumstances, we adopt a principal mean of lessening irritation in the stomach and intestines, and likewise in the particular part of the body diseased, and thus nature is assisted in her efforts to restore the frame to health, and the medicines made use of are capable of exerting their full effect. This is a fact worthy of great attention from patients convalescent from any severe disease, since a small excess in the quantity of food taken at this period, will often bring back the disease with an aggravated force, and is, perhaps, the most frequent cause of relapse.

There are three kinds of appetite: 1st., The *natural or healthy* appetite, which is stimulated and satisfied with the most simple dish, as certainly as with the most palatable: 2d., The *artificial* appetite, or that excited by stomachic elixirs, liqueurs, pickles, high-seasoned dishes, wine, &c., and which remains only so long as the operation of these stimulants continues: 3rd., The *habitual* appetite, or that by which persons enjoying no inconsiderable stamina accustom themselves to take food at stated hours, but frequently without relishing it. The *true* and *healthy* appetite alone can ascertain the quantity of aliment proper for the individual. If we were seldom to trespass the due limits of temperance, our natural appetite would be able accurately to determine how much food we may consume with satisfaction and benefit; but the usual physical education of children is now so loose and bad, that we rarely meet with a natural and healthy appetite either among them or adults. If after a meal we feel ourselves refreshed, and as cheerful as before it, or more so, we may be assured that we have taken no more than a proper quantity; for, if the right measure be exceeded, torpor, heaviness, and relaxation, are the necessary consequences, our faculty of digestion will be impaired, and a variety of complaints gradually induced. The celebrated *Louis Cornaro* used to speak with delight of the cheerfulness and serenity he felt after partaking of the small portion of food which he was accus-

tomed to enjoy. Before he determined on adopting a spare diet, he was much afflicted with lowness of spirits, heaviness, and debility, and severe bowel complaints were the torment of his life; but his careful and abstemious diet perfectly cured him of these and other evils. There can be no doubt that the majority of the more respectable inhabitants of Great Britain eat and drink twice as much as is necessary and beneficial; and this is nearly equally true of the same class of persons in most of the other nations of Europe. It is a remarkable fact, that almost all those who have lived to a great age, have uniformly observed a very temperate diet, and in numerous instances of longevity it has been scanty and coarse.

With respect to the quality of our food, it may be safely said that the flesh of full grown animals is much more digestible and nutritious than that of their young, and, as it respects the larger animals, this rule is without an exception. Beef and mutton, for example, are more easily digested and more wholesome than veal or lamb; yet it may be proper sometimes to give the preference to the latter in the case of patients who are convalescent from acute diseases, because they are less likely directly to excite heat or feverishness. Even here, however, it will be found, that where the stomach of the patient is very delicate and irritable, a little tender beef or mutton will produce much less heat and general uneasiness than either veal or lamb, particularly the former. It may also be assumed as a general rule in chronic diseases and in health, that a solid diet is more digestible, and better than a fluid one. In acute diseases it is the reverse. All salted meats are with difficulty digested, and unwholesome. Generally speaking, the flesh of tame animals is more wholesome than that of wild animals, the flesh of quadrupeds than birds, and that of birds than fishes.

As the quantity of our food ought to vary according to the appetite, the supply required, and the state of the health of the individual, so ought the quality. A keen and healthy appetite, calls for a daily supply of animal and other solid food, while the patient with a deficient and capricious appetite, will often find a vegetable diet of most advantage. The sedentary and inactive, and those whose constitutions are naturally delicate, do not require such nourishing food as those of a strong robust habit, and others who are daily engaged in laborious occupations in the open air. Infants need less animal food than children, children than adults, and women than men.

It should be remarked, that the nourishment conveyed by both animal and vegetable food is much the same, but the animal product is in greater quantity, and more easily di-

gested, while the vegetable retains its more watery nature, with a portion of unassimilating saline matter, which though introduced is again expelled by some of the excretions. The animal blood then is richer, more elaborated and stimulating, and excites a stronger action of the system, than that produced from vegetables. Both products, however, equally take on an alkalescent nature in the circulation; for the acescency of the vegetable is confined entirely to its action on the stomach and bowels. Thus, from animal food a greater supply of nourishment is received for the wants of the system, depending on its greater quantity of oil, and its longer retention in the body than vegetable food.

It is obvious from these facts, and other considerations which will present themselves to every thinking mind, that in regulating the proportion of animal and vegetable food proper in any given case, attention must be paid to the season, way of life, and climate. In summer, the quantity of vegetable food should be always increased, whatever our habits may be; the propriety of this is evidently pointed out by nature, from its abundance at this period. This increase of vegetable food is also the more necessary if the appetite is naturally keen and healthy, as a more strongly nourishing aliment would at this time expose to all the effects of putrescency, which the increase of the vegetable diet will, on the contrary, counteract.

The way of life must also regulate a good deal the proportion of vegetable nourishment. An essential circumstance in the use of all diet is, the production of such a distention of the stomach and bowels as may enable them to act properly on their contents. In the sedentary and inactive, it is particularly desirable that this distention should be produced by food of a less nourishing kind, and that no more nourishment be received than what the wants of the system require. Hence, in these cases, a vegetable diet is to be preferred, while in the active and laborious, the plan should be reversed.

The quality and nature of our food should be in a great measure determined by climate, and there is no doubt that the mortality of warm climates is aggravated by the use of too much animal food, and strong drink. It is a common practice among Europeans in sultry climes to eat plentifully of either fresh or salt meat, at breakfast, tiffin, and dinner; this practice is followed day after day, and my only surprise is, that such a dangerous course of living does not produce a much greater mortality among our countrymen in tropical countries than what actually takes place. A diet of a vegetable and acescent nature, with a large proportion of condiment, such as we find used by the natives of those countries, is best suited to the

preservation of health; for by this excess of condiment, the morbid effects on the stomach and bowels, natural to vegetable food, are counteracted, and the chyle formed from it passes into the circulation in a proper state for supporting the body in such a situation. On the other hand, in a colder region, a permanence of nourishment is required, which animal food particularly conveys; and as this nourishment is less apt to disorder the stomach and bowels, no great portion of condiment is necessary, either as a stimulus to the organ, or in order to avoid any hurtful consequences that may arise. The proportion, therefore, of vegetable food is clearly pointed out to be small, and chiefly of the farinaceous or least acescent kind.

After these general observations on diet, we shall take a brief survey of the principal articles employed as food.

1. *Of Animal Food.*

The animals most commonly killed for the purpose of food, are *the common bull and cow, the sheep, the calf, the lamb, the common stag, the fallow-deer, the domestic boar and sow, the hare and rabbit*, the amphibious animals the *turtle and frog*, and various kinds of birds and fishes.

The flesh of *the bull* has a strong disagreeable smell, and is dry, tough, and difficult of solution in the stomach. Bull-beef is rarely eaten. But the flesh of the ox, or castrated animal, called *ox-beef*, is a highly nourishing and wholesome food, readily digested when fresh, by healthy persons, and constituting a principal part of the common diet of the inhabitants of this and many other countries. It is the most strengthening of all kinds of animal food, and is almost the only species of such food that is in season throughout the year. Cow-beef is not so tender, nor so nourishing, nor so digestible as ox-beef.

Mutton is well known to be a highly nutritious and wholesome meat. It appears to be the most digestible of all animal food, and is perhaps more universally used than any other. The flesh of rams has so strong and disagreeable a taste, and is, besides, so exceedingly tough and difficult of digestion, that it is never eaten but by those who cannot afford to purchase mutton of a better quality. *Ewe-mutton*, if it is more than between three and four years old, is likewise tough and coarse. *Wether-mutton*, or the flesh of the castrated animal, is most esteemed, and is by far the sweetest and most digestible.

Veal is usually considered not at all of a heating nature, and is therefore allowed, perhaps generally by the profession, to patients convalescent from an attack of fever, and to those who have a disposition to bleeding from the lungs or elsewhere,

especially with the addition of some acid; but it is in my opinion so very indigestible an article, and has uniformly so strong a tendency to irritate the stomach and intestines, that I wholly proscribe its use wherever persons are not strong and healthy. In all stomach complaints it is peculiarly injurious. The flesh of calves which have been robbed of their blood by repeated bleedings, or reared by the hand with milk adulterated with chalk, and confinement in small dark places, so as to prevent motion, is unusually depraved.

Lamb being less heating and less dense than mutton, is better suited to persons convalescent from acute diseases, but by the majority of patients labouring under indigestion, or any other severe affection of the stomach, it is not found so digestible as wether-mutton. It is, however, a light and wholesome food, especially when the lamb is not killed too young. A lamb that has been allowed to suck five or six months, is fatter and more muscular, and in every respect better than one which has been killed when two months old, and before it has had time to attain its proper consistency. *House-lamb* is a dish esteemed chiefly because it is unseasonable. Like all animals raised in an unnatural manner, its flesh is depraved and unwholesome.

The flesh of the *common stag*, and *fallow-deer*, is well known under the name of *venison*, and is very digestible, wholesome, and nutritious. The common stag should not be killed till he is above four years old, and the flesh is fattest and best flavoured in the month of August.

The flesh of the sow is strong, and makes bad bacon. It is the flesh of the castrated animal that is in common use, and that is known by the name of *pork*. It is a very savoury food, and affords a strong nourishment, suited to persons who lead an active or laborious life, but is not so easily digested, nor can it be considered wholesome. The too frequent and long continued use of this meat favours obesity, produces foulness of the stomach and bowels, and occasions disorders of the skin. The flesh of the *sucking pig* is reckoned a great delicacy, is very nourishing, and perhaps more wholesome than that of the full grown animal; but it is not readily dissolved in the stomach. Bacon is a coarse, heavy, and very indigestible food, only fit to be eaten by robust and labouring people. Those who have an impure state of the fluids, wounds or ulcers, or a tendency to cutaneous eruptions, as well as those who are afflicted with indigestion, cough, or consumption, should refrain from the use of pork.

The flesh of the *wild hog* is dense, but sufficiently tender, very nourishing, and more savoury and digestible than that of the domestic hog. It is in season in the month of October.

The head is esteemed the finest part, and the flesh of the young animal is reckoned a great delicacy.

The *hare and rabbit* are sufficiently wholesome and nutritious. The flesh of the rabbit is softer, more digestible, and less heating than that of the hare; but it is not so nourishing. Wild rabbits are both more digestible and more palatable than such as are domesticated.

The *turtle* is a most nourishing and palatable food, and the esculent frog, though not very nutritious, tastes much like chicken.

Of birds, the following species afford excellent nourishment, and are for the most part easily digested, *viz.*—the common *fowl*, *pheasant*, and *partridge*, the *turkey*, *Guinea hen*, and *quail*, the *common pigeon*, *lark*, *thrush*, *blackbird*, and *fieldfare*. The flesh of the young *rook* is very similar to the *pigeon*, but is rather inferior in flavour and digestibility. The *woodcock*, the *snipe*, the *great plover*, and the *lapwing*, furnish very good and savoury food. The *swan*, the *goose*, the *wigeon*, the *teal*, and the *wild and tame duck*, are nourishing, and wholesome for occasional food, but they are not very easy of digestion; the *barnacle*, the *puffin*, the *soland goose*, *and the black-backed gull*, are very fat, heavy, and have generally a fishy taste.

It is very probable that the eggs of all the birds now mentioned, and perhaps of most others, might be employed as food, but custom and convenience have given the preference to those of the common hen, the Guinea hen, and the duck. The fluid contents of an egg consist of the white and the yolk. The former very much resembles the lymph of the blood, or the coagulable part of milk. The latter, *viz.* the yolk, is an animal mucilage, composed of oil, coagulable lymph, and water. It is miscible with cold water, so as to form an emulsion. The eggs of all granivorous birds, and especially of the domestic fowl, yield a mild, demulcent, and strengthening aliment, well suited to consumptive and delicate persons, and such as are exhausted by immoderate evacuations. When lightly boiled, that is, for not more than three minutes, they are very easily digested; but when boiled hard or fried, they sit heavy on the stomach, and are unwholesome. Raw eggs are gently laxative, and are found to be serviceable in cases of jaundice and obstructions in the digestive organs.

I would here remark, that all broths and soups, and more particularly beef tea, and animal jellies, should invariably be taken with biscuit or bread, which renders them more easily digested, and much more nutritious. It is a remarkable fact that no man can subsist on even the strongest beef-tea. If confined to it *alone*, he rapidly emaciates, and would die in a

very short time, but if it be mixed with bread, he finds it nourishing.*

The wholesomeness of *fish* in diet has been much disputed. According to some, it is the most delicious food of any; and according to others, it is without strength or substance. In the opinion of the present author, it affords, upon the whole, but little nourishment, and is, for the most part, of difficult digestion, and this appears to be the general sentiment of intelligent medical men.† Being of all animal substances the most putrescible, it is much inferior in quality to birds, and quadrupeds, and, on this account, it seems questionable whether it ought to be allowed to febrile patients, or convalescents, from acute diseases. The fat of fish is still more insoluble and indigestible than that of other animals, and readily turns rancid. Acid sauces and pickles, calculated to resist putrefaction, render fish somewhat better, and more wholesome for the stomach, while butter has a tendency to impede digestion, and to promote the corruption of its flesh. On the contrary, spice and salt, used in moderate quantities, stimulate the fibres of the stomach, and facilitate the digestive process.‡

Salt-water fish are the best of any, as their flesh is more solid, more agreeable, and healthy, less exposed to putrescency, and less viscid. They possess these excellent qualities, when fresh; when salted, they have all the properties of salt flesh, and consequently its disadvantages. Those fish which have scales are, in general, the most easily digested, and the best; and of all these the fresh herring appears to deserve the preference. The *herring*, the *whiting*, the *sole*, the *cod-fish*, the *dory*, the *turbot*, and the *flounder*, are perhaps the most digestible and best of fish. *Salmon*, *mackerel*, *lobster*, and most other kinds of shell-fish, are very difficult of digestion, and unwholesome.

Oysters are eaten both raw and dressed; when raw, they are in every respect preferable; for by cooking, they are hardened, and deprived of the salt-water which promotes their digestion in the stomach. Eaten raw, they are nourishing and easily digested, and may be taken with great advantage by the robust as well as by the weak and consumptive. They are also generally attended with a laxative effect, if eaten in any quantity, and are, therefore, well suited as an article of diet

* The reason of this is fully described in my little work before alluded to, entitled, "*Sure Methods of Improving Health.*"

† As a proof how little nutritive substance is to be found in fish, it may be observed, that the jockeys, who, to reduce their weight, *waste themselves* at Newmarket, are not allowed meat, nor even pudding, when fish can be got.

‡ It is worthy of observation, that fish and milk ought never to be taken at the same meal, being a particularly indigestible combination.

for those liable to costiveness. Stewed oysters are particularly indigestible and unwholesome, and should never be eaten by the sick or delicate. They are extremely pernicious to lying-in women, indeed, so much so as to have occasioned death, in more than one or two instances, when given to women in such a situation.

Oysters being a mild and cooling article of food, are of the utmost benefit to those who are troubled with warm flushings of the face, and other feverish symptoms, usually felt in declines, and in nervous and irritable constitutions. It is quite possible, by making them a principal part of a meal, to prevent in a great measure the irritation and heat which produces the hacking and distressing cough, in the more advanced stages of consumption. The great object to be kept in view in the prevention of consumption, is to maintain and increase the tone of the general system, and oysters, and other such mild nourishing food, will lend us powerful assistance in preventing consumption in those who are disposed to it, either from family or personal causes. Only a very small quantity of vinegar should be used by those who eat oysters to prevent consumption; those who take them to cure that disease may advantageously take it more freely, since this, and most other acids, have a favourable effect in subduing hectic fever, and in assisting the efforts of nature to overcome the disease.

As occupying a middle rank between animal and vegetable food, I shall here notice milk and its various products.

Milk holds a conspicuous place among the articles of nourishment. It is the proper and natural food of the young of all animals of the mammalia class; and cow's milk makes a principal part of the daily diet of a great proportion of the human race, both in the infant and adult state. On account of the abundance of oily and cheesy matter which it contains, cow's milk is by no means so well suited to infants as human milk; but as the mode of living in civilized society often depraves the quality of woman's milk, or prevents its secretion, cow's milk, in too many instances, becomes a necessary substitute. On such occasions, as it is too heavy to be given alone, it should be diluted with water; and as it is disposed to become more acescent than human milk, and from that cause to produce gripings and other disorders of the bowels in young children, it will often be useful to mix with it decoctions of animal substances, such as chicken or veal broth, or decoction of hartshorn shavings; of which last, two ounces should be boiled in a quart of water, over a gentle fire, till the whole is reduced to a pint; when, after it has become cold, it will be of the consistence of a light jelly. This, mixed with about twice its

quantity of cow's milk, with the addition of a little sugar, forms for young subjects a proper aliment, approaching nearly to the nature of human milk. Milk-porridge, as well as those puddings composed chiefly of milk and flour, are heavy, difficult of digestion, and therefore unwholesome.

Of course, the quality of milk varies greatly according to the season of the year, the pasture upon which the animal is fed, and the degree of exercise and free air allowed to it. In spring and summer the milk is peculiarly good and wholesome, on account of the salubrious nourishment of the herbs. In winter it is much inferior. Good cow's milk ought to be white, without smell, and so fat, that a drop being allowed to fall on the nail, will not run down in divisions. It is lighter, but contains more watery parts than the milk of sheep and goats; while on the other hand, it is more thick and heavy than the milk of asses and mares, which approaches nearest the consistence of human milk.

It is an excellent article of diet both for children and adults, being for the most part easy of digestion and very nutritious. It is used medicinally in consumptions, especially in their early stage; in gouty affections, after the paroxysm is gone off; in small-pox and measles, especially the malignant kind, diluted with water as the common drink; in cases of strangury and dysury from the absorption of cantharides, &c.; and in many spasmodic and nervous affections, and disorders of the general health.

When milk is used medicinally, it is often serviceable to dilute it with Pyrmont, Seltzer, soda, or lime-water. The two last, especially the soda-water, prevent acidity, and make it sit easier on the stomach. To obviate costiveness, which milk is apt to induce, it is often proper to mix brown sugar, or magnesia with it, or to boil it with oatmeal or veal broth.

In general, it is improper in inflammatory fevers, unattended with pustular eruptions; in bilious fevers; in scrophulous cases; and in rickets. It seldom agrees with hypochondriacs, with the plethoric, the phlegmatic, or the corpulent, and disagrees particularly with tipplers, or those addicted to strong liquors.

The following are the principal products and preparations of milk in dietetic and medicinal use, viz. *cream*, *butter*, *curds*, *cheese*, *whey*, and *butter-milk*.

Cream is exceedingly nourishing, and in small quantities sufficiently digestible and wholesome; when used freely it is difficult of digestion, and unwholesome.

Butter, when taken in moderate quantity, spread cold on bread, is nutritious, and, in general, not difficult of digestion; but if eaten freely, it is certainly pernicious, particularly to

such persons as have weak digestive organs. Melted butter and salt butter are unwholesome.

Curds are not to be recommended. In considerable quantity they are highly oppressive to the stomach.

Cheese is not easily digested, though by producing a temporary stimulus in the stomach, it seems sometimes to assist a little in the digestion of other food. It cannot be considered very nutritious, and being the coarsest and most glutinous part of the milk, is an aliment suited only to strong stomachs, and to such persons as use great and constant exercise. It is of a very constipating nature, and should be altogether avoided by those of a costive habit of body. In the higher orders of society, it is used chiefly as a condiment. Toasted cheese, though more agreeable to most palates than raw, is still more indigestible and unwholesome.

Whey is the watery saccharine part of milk, freed in a great measure from the butyraceous and caseous matters. It is diluent, and slightly aperient, and diuretic; and is given in consumptions, dysenteries, jaundice, &c. alone, or mixed with mineral waters, and sometimes impregnated with the juices of medicinal herbs.

Butter-milk is milk deprived of its oily matter by churning or agitation. It is nourishing, cooling, and diluent, and is used sometimes with great advantage in wasting, or a bad habit of body, hectic fever, and consumption. Good butter-milk is frequently of much service, both as an article of diet, and a remedy in pulmonary consumption, particularly in the early stages of the florid species, so often met with in the young and blooming.

Before closing this section, I would remark, that the preparation of milk called *blanc mange* is by no means so proper for patients and delicate persons as is generally supposed. It is not easily digested, and is apt to disorder the stomach.

2. *Of Vegetable Food.*

The various articles of nourishment we derive from the vegetable kingdom, may with propriety be divided into five orders, viz. 1. The different species of farina, or grain, such as *wheat*, *rye*, *barley*, *oats*, and *rice;* 2. The legumes, or pulse, such as *peas*, *beans*, &c.; 3. The various kinds of *salads* and *pot herbs;* 4. All the different kinds of *roots;* and 5. *fruits.*

The *farinaceous* vegetables are, of all others, the most wholesome and nourishing, and of these, the preference is justly given to *wheat.* Bread is with much propriety called *the staff of life.* Home-made leavened bread, of a day or two old, is extremely easy of digestion, wholesome and nutritious; but we cannot

speak in so favourable terms of baker's bread, and new bread of any sort is difficult of digestion, and unwholesome. Bread made with new flour is more palatable than that made with old, but is not so digestible. Rye-flour makes very good bread, and is in common use on the continent.

Puddings made with flour are, for the most part, wholesome, when taken in moderate quantity, but are not so easy of digestion as bread, or animal food. Perhaps the most indigestible are the hasty, batter, and Yorkshire puddings. The *vermicelli* and *macaroni* of the Italians, as well as all the dishes made of flour mixed up into paste, and either boiled in water or stewed in butter are indigestible, and ill calculated for patients and convalescents, to whom they are frequently administered. All unfermented pastry is pernicious.

Barley is a very useful and wholesome vegetable. Pearl-barley, well boiled in water, forms a diluting, lightly nutritive drink, of much service to all sick persons.

Oats, when boiled or deprived of the husk, and reduced to groats, or meal, are used as a common article of diet for the infirm and sick, in Great Britain, France, and Germany. When boiled in water, they impart a thick mucilage, which is very nourishing, wholesome, and digestible. This refers only to the mucilage obtained from genuine groats, or oatmeal, procured from a mealman who can be depended upon; as the oatmeal in common use is in general an impure article, and all *patent prepared groats, and meal*, as they are called, are adulterated, and not worthy of confidence.

Rice is a nutritious and wholesome vegetable. It is easy of digestion when taken in conjunction with some condiment, as cinnamon, nutmeg, allspice, and the like; these additions make it more palatable as well as more wholesome and obviate its tendency to confine the bowels. It is almost the only food of the native inhabitants of India—a sufficient proof of its mild, nutritive, and wholesome qualities.*

All vegetables of the *pulse kind* are liable to strong objections, as articles of diet for civilized man. They are very indigestible, heating, productive of great flatulency, and contain little nourishment. Both peas and beans, whether green or dried, oppress the stomach, and are fit to be eaten only by the strong and laborious. Pea-soup is particularly indigestible and unwholesome.

French beans, however, are among the best vegetables our gardens produce. I mean the young green pod, eaten as it usually is in England.

* Ale should never be drank after rice and milk, as it is almost certain of producing colic, or some other disorder in the bowels.

The best pot-herbs are *asparagus* and *artichokes*, more especially to those troubled with gravel. Young spring greens and cabbages are wholesome, but after the spring season they become indigestible, flatulent and pernicious. Young brocoli and cauliflowers are also useful vegetables. Spinage does not very well agree with the human stomach.

Sallads, *Lettuce*, and all undressed vegetables of this kind, contain little nourishment, and are not much to be recommended. Blanched lettuce, being soporific, may sometimes be advantageously used at supper, by those who are frequently distressed by restless nights.

The fourth order of vegetables consists of all the esculent roots, of which the *potatoe*, the *turnip*, and the *onion*, are the most wholesome and digestible. We may consider it as an unerring rule, that any kind of aliment for which we feel a natural and permanent appetite is salutary, and conformable to our nature. Of this kind is that valuable root the potatoe, which in the most simple preparation, and without any addition but salt, affords an agreeable and wholesome food to almost every person. It is one of the lightest alimentary substances, and can be hurtful only when immoderately used, or when not mealy. It is very nutritious, and sufficiently easy of digestion; yet some persons who are much troubled with indigestion find it to disagree. The arrow-root prepared from potatoes is very good; indeed, it seems that the greater part of that powder sold in England is extracted from the potatoe. The dry mealy sort is the most easy of digestion, and the simplest way of preparing them for the table is the best: mashed potatoes are difficult of digestion.* Turnips are nutritious, wholesome, and easily digested. Onions assist digestion, although they cannot be considered very nourishing. They are best suited to persons

* The history of the potatoe conveys to us a most instructive lesson, forcibly reminding us of the extraordinary lengths to which prejudice will carry mankind, and showing us by what apparently trivial circumstances this prejudice is often removed, when the most powerful and influential arguments have failed to weaken it. The introduction of this valuable root to the gardens and tables of the people, received, for more than two centuries, an unexampled opposition from vulgar prejudice, which all the philosophy of the age was unable to dissipate, until Louis XV. of France, wore a bunch of the flower of the potatoe in the midst of his court, on a day of festivity: the people then for the first time obsequiously acknowledged its usefulness, and its cultivation as an article of food soon became universal. Now, its stalk, considered as a textile plant, produces in Austria a cottony flax,—in Sweden, sugar is extracted from its root,—by combustion, its different parts yield a very considerable quantity of potass,—its apples, when ripe, ferment and yield vinegar by exposure, or spirit by distillation,—its tubercles, made into a pulp, are a substitute for soap in bleaching,—cooked by steam, the potatoe is one of the most wholesome and nutritious, and, at the same time, the most economical of all vegetable aliments,—by different manipulations, it furnishes two kinds of flour, a gruel, and a parenchyma, which in times of scarcity may be made into bread, or applied to increase the bulk of bread made from grain,—and its starch is little, if at all, inferior to the Indian arrow root. Such are the numerous resources which this invaluable plant is calculated to furnish. See *Paris's Pharmacologia, vol.* 1, *page* 54.

of a cold and phlegmatic habit, and those whose stomachs require a stimulus. *Parsnips*, when well boiled, are nourishing and wholesome, and so is *Celery*.

Carrots, and especially all kinds of *radishes*, are rather difficult of digestion and unwholesome.

The best kinds of fruits are *apples*, *pears*, *gooseberries*, *raspberries*, *red and white currants*, *grapes*, *peaches*, *apricots*, *strawberries*, and *oranges*. Of course they are wholesome only when quite ripe, and of apples and pears the more mellow and tender the fruit the better. *Cherries*, *plums*, *olives*, *cucumbers*, *melons*, and all kinds of *nuts*, are in general difficult of digestion, and fit only for the strong and active. *Black currants* have a strong tendency to affect the bowels, and are not very wholesome.

3. *Of Drink.*

Drink is indispensible to the solution and digestion of food, and to repair the waste which our fluids are incessantly suffering. Though the season, the state of the weather, cold, heat, the nature of our food, and the greater or less degree of our exercise, require more or less drink at one time than at another, yet we ought to drink only when we are thirsty, and to desist when the thirst is quenched. The more we eat, and the drier our food is, the more we ought to drink in moderation.

The phlegmatic require less drink than the sanguine and choleric, the sedentary than the laborious, and all persons need less in winter than in summer.

To drink immediately before a meal is improper, because the stomach is thereby distended, and the gastric juice diluted, and digestion, consequently, cannot proceed in so favourable and perfect a manner. Hence, to avoid the necessity of drinking, it is advisable not to take violent exercise immediately before dinner. It is also somewhat objectionable to drink much during the time of taking food; as the same consequences ensue as from drinking directly before a meal. To take a small quantity of drink at the time of meals is natural and proper, but a large proportion of fluid swallowed at this period renders the stomach incapable of receiving the due portion of aliment, and impedes the digestive process.

Drinks may be divided into common water, animal fluids, animal infusions or decoctions, vegetable infusions or decoctions, and fermented liquors. The first three have been already spoken of, and I shall here only make a few observations on the last heads.

The vegetables employed for infusions or decoctions used as drink, are chiefly tea, coffee, and chocolate.

The annual consumption of *tea* in this kingdom is enormous; yet physicians are still divided in opinion respecting its real qualities, some considering it to be, upon the whole, a wholesome and beneficial diluent, while others look upon it as pernicious, and attribute to its frequent employment chiefly the visible increase of nervous disorders, and other complaints of debility. A considerable majority of professional men, however, rank among the former; and I think there is much reason to consider good black tea, when drank in moderate quantity, as wholesome and useful. It forms a refreshing antispasmodic beverage, very suitable for the morning and evening, but should not be taken either strong or hot, and the addition of milk and a little sugar, renders it more wholesome. Individuals of a rigid and solid fibre require more of it, and are more benefited by it, than those of an opposite habit; but none should take more than three small tea-cupfuls morning and evening. Generally speaking, I am fully persuaded it is superior for common use to cocoa, chocolate, or coffee, though it is very probable, that some of our indigenous plants would yield as wholesome and palatable an infusion as the tea-leaf of China. With some persons, however, no kind of China tea agrees, and then an infusion of agrimony, or some other native plant, should be substituted for it. I may state on very respectable authority, that the first leaves of whortleberry, properly gathered and dried in the shade, cannot be distinguished from real teas. Sage, (the *Tomentosa*, or *Balsamic Sage,)* and balm, *(Melissa Hortensis*, or *Garden Balm,)* are likewise valuable substitutes for tea, more particularly in the case of debility in the stomach and nervous system.* It is certain that all *green* tea is exceedingly pernicious, having a strong tendency to injure the stomach and bowels, and the whole nervous system. Medicinally, tea is occasionally of service in ardent and bilious fever, cramp of the stomach, flatulency, and to relieve the sensations of oppression and weight at the pit of the stomach, so frequently accompanying indigestion and bilious complaints. It is, however, worthy of particular notice from the dyspeptic, that few things will injure him more than an immoderate indulgence in this or any other warm slop.

Tea being an article of diet of daily and universal consumption, I would beg the reader's attention to the following rules in using it, the observance of which cannot fail to be of great benefit: 1. Carefully avoid the high-priced and high-flavoured

* John Hussey, of Sydenham, in Kent, who lived to 116, took nothing for his breakfast for fifty years, but balm tea, sweetened with honey.

teas, more especially if *green*, which generally owe their flavour to pernicious ingredients, and abound most with those active principles, whence the noxious effects of the article arise. 2. Take with it a good proportion of milk, and some sugar, as a correction to any possible noxious qualities present. 3. Let the quantity of tea used at each infusion be very moderate. 4. Make the infusion properly, with water soft and otherwise of a good quality, and in a boiling state. 5. Tea is a beverage better adapted for the evening than the morning, and therefore less of it should be taken at the latter than the former period. The first meal we take in the morning to recruit the body, after the loss it has sustained during a long fast through the night, and to prepare it for the labours of the succeeding hours of the day, should be in some measure substantial, consisting of a large proportion of solid aliment. Indeed, except when drank soon after a hearty dinner, solid nourishment should always be taken with tea.

Coffee is heating, and does not set so easy on the stomach as tea. The weakly and delicate generally find it difficult of digestion, and it is not proper for those troubled with indigestion; yet it is sufficiently wholesome for occasional use. It is most wholesome when made of a moderate strength. Strong Mocha coffee sometimes affords considerable relief in the paroxysm of spasmodic asthma.

Chocolate is more nourishing, more wholesome, and less heating than coffee. It is commonly made much too thick, and with too much milk, which renders it oppressive and cloying to the stomach. It is far better when made with water, and rather thin, the milk being added to it when poured out, in the same way that we add it to tea. In this form it is a light, nutritive, and wholesome beverage, well adapted to the nervous, the delicate, and those of a costive habit of body. It is improper for the corpulent, and those disposed to inflammatory diseases, or apoplexy.

Cocoa is in fact only a weak chocolate. It is a light, nutritious, and wholesome drink.

The principal fermented liquors are malt liquors, wine, and ardent spirits.

Well-fermented malt liquors, whether from barley or other grain, provided they are not too strong, are wholesome, refreshing, and strengthening drinks. Medical men, generally, now seem to think they have made a valuable discovery in the fact, that beer is a very bad thing for all patients; but this, like many of our modern discoveries, can be seen only by the short-sighted. It is not a fact. Good home-brewed beer is much more suitable to the condition of patients in general,

than either wine or brandy and water. As these liquors are very nutritious, they are chiefly suited to persons who lead a busy and active life; they are, indeed, the most useful species of fermented liquors to the weak, the lean, and the laborious, provided they are not very subject to flatulency, nor troubled with diseases of the breast. With some sedentary and bilious persons they do not agree so well; and they are improper for the corpulent and asthmatic, and those who are liable to giddiness and other complaints of the head. They are better when of a middle age than when kept very long; and ale, with all the stronger malt liquors, although more nourishing, are also more difficult of digestion, than beer of a middling strength. Beer made from an infusion of malted groats, or malted rye, is lighter and more diuretic than the common barley beer. Spruce beer is a powerful diuretic and antiscorbutic, and is a wholesome beverage for the summer; in winter it is too cold for some constitutions. Bottled beer is, on account of the fixed air which it contains, more refreshing than the barrelled. It is frequently prescribed as an antiseptic and restorative in low fevers and convalescencies; but care must be taken during the use of it, that it does not operate too freely by stool. London porter, with the common properties of malt liquor, possesses stomachic and diuretic qualities; but being strongly impregnated with bitters of a narcotic kind, it is by no means so wholesome for daily use as good and pure beer. Owing to this narcotic impregnation, it is very apt to induce drowsiness, and, consequently, is improper whenever there is a tendency to head-ache, apoplexy, or other affections of the head.

Of the use of foreign wine as a medicine, I have already spoken at page 91, and shall now confine the few observations to be made respecting it, to its use as an article of diet. The sweet wines are nourishing, and may sometimes be useful to the weak and convalescent, but they are not so wholesome as the wines in more common use. The acid wines, as the Rhenish and Hock, are the least heating, and the most diuretic, and well calculated for consumption in hot weather. They pass freely by the kidneys, and are gently laxative; but all thin or weak wines, though of an agreeable flavour, yet from their containing little spirit, are readily disposed to become acid in the stomach, and to occasion or increase gravelly complaints, excepting cases of *white* gravel, (see the article *Gravel,)* in which they are in general more useful than any other sort of wine. It ought to be observed, however, that with some delicate persons, the best Rhenish wines agree very well, and are less liable to ferment than many of the stronger wines. The dry and strong wines, such as Sherry, Madeira,

and Marsala, and the dry and light, as Burgundy, Claret, and Hermitage, are the most wholesome; they are more cordial than the acid ones, and can be taken with safety in greater quantities than the sweet. The gentle stypticity, or astringency in genuine claret, renders it in the opinion of many, on the whole, the most wholesome of any strong liquor whatsoever, to be drank plentifully. Port is a strong, astringent wine, and, when not mixed with more than a very small portion of brandy, is generous and stomachic, and well suited to the generality of British constitutions, in tolerable health. It is well calculated for cold and moist weather; but like other red wines, is apt to occasion costiveness, which renders it very objectionable to those who are habitually costive, and makes a change to white wine frequently advisable, even to those who are not.

It should be remarked, that sparkling brisk wines, as Champagne, inebriate more speedily than the stiller wines, but the morbid excitement is of short duration, and the subsequent exhaustion is comparatively trifling. In feverish habits, Burgundy, Port, and the stronger white wines are to be avoided. To those who have a disposition to corpulence, Claret, Hock, or Moselle, on account of their diuretic properties, are preferable to every other kind of wine for daily use.

The moderate use of wine is safe, and often beneficial to those who have passed the meridian of life, but to young persons it is almost invariably pernicious. Children in tolerable health are never strengthened, but always injured by it.* As a tonic and stomachic to the aged, three or four moderate sized glasses of good wine after dinner ought to be sufficient to most men. Now and then, perhaps, on very particular occasions, in the case of strong persons, half a bottle may be occasionally permitted to persons in health, but to go frequently to that *utmost limit* of rational indulgence cannot fail to shorten life, at least in most instances.

Taken medicinally, in small quantities, *ardent spirits* are a powerful cordial and corroborant, and sometimes prove of much service in cramp or gout in the stomach, chronic spasmodic pains of the bowels, and flatulency. But in their nature, and ordinary effects, they are extremely unfriendly to the human constitution, and should never be taken by those who are desirous of preserving their health, except occasionally as a medicine. When used in any other manner, they stimulate the stomach and neighbouring viscera to an excessive and unna-

* For further information respecting the qualities and use of wine, as well as of other points relating to diet in general, see my Treatise entitled "*Sure Methods of Improving Health.*" A striking proof is there related of the injurious effects attending the use of wine in children in tolerable health.

tural action, impair the appetite, impede digestion, and lay the foundation of organic mischief in the most important of the digestive organs, and these effects are as certainly produced by the frequent use of spirits diluted with water, as when taken pure. A capricious and deficient appetite, head-ache, emaciation of body, lowness of spirits, and disease in the stomach, intestines, or liver, are the common effects of an indulgence in the use of ardent spirits.* They are much less detrimental in very cold countries, than in hot or temperate climates. French brandy appears to be the least pernicious; it is the most bracing and stomachic; gin and rum the most diuretic and sudorific. Their qualities are much improved by long keeping.

4. *Of Condiments.*

Condiments are those substances which are taken with our food to promote digestion, or to correct some hurtful property in the food taken. They are usually divided into saline, saccharine, oleaginous, and aromatic.

Of the saline condiments, the principal are common salt and vinegar.

Common salt, by its stimulant action on the throat, gullet, and stomach, promotes the secretion of saliva and of the gastric juice, and thereby facilitates digestion. It is a natural and necessary stimulant to the digestive functions, and its daily use seems to conduce much to the preservation of health and strength. It is not generally taken so freely as it ought to be by infants and children.

Vinegar, in small quantities, is a grateful and salutary stimulus to the stomach, correcting the putrescency of animal food, and the flatulency of vegetable. Its use is improper in many valetudinary cases, especially for gouty persons, and those troubled with red gravel, or costiveness; in green sickness; and for rickety patients and young children. It is very useful to those troubled with white gravel.

Pickles are merely vegetable receptacles for vinegar, but the vegetable being hardened by the acid, renders it somewhat difficult of digestion, and, therefore, pickles are not much to be recommended. The pickled onion seems to be among the most wholesome of this sort of condiment.

Sugar is nutritious, antiseptic, and laxative. In moderate quantities it is wholesome, but being very fermentable, is apt in some constitutions, to produce flatulency, heat, and thirst.

* The celebrated John Hunter on dissecting a man who had been much addicted to the use of spirits, found the blood converted into a kind of oily matter: And it has been proved by experiment, that the pernicious effects of spirits upon horses are as great as those produced by giving them various well known poisons.

Rickety children, chlorotic girls, hysterical women, and all who are troubled with acidity and weakness in the stomach and bowels, should use it sparingly; and those who are anxious to preserve their teeth white and sound, should not make free with it.

The oleaginous condiments, consist merely of olive oil and butter.

Oil, when used as a seasoning to raw vegetables, checks their fermentation in the stomach, and thereby prevents them from proving too flatulent. Used in this manner, in small quantities, it proves a help to digestion; but when taken in considerable quantities, it has an opposite effect, and lays the foundation for bilious complaints. It seldom, however, agrees with weak stomachs; for in such cases, even in its mildest state, it easily generates a rancid acrimony, extremely injurious to digestion.

Of *butter* I have already spoken at page 164.

The aromatic condiments consist chiefly of the foreign spices, as pepper, Cayenne pepper, cinnamon, nutmeg, cloves, ginger, and of a few garden roots and seeds, such as garlic, onion, horse-radish, and mustard.

Most of these are wholesome, when taken in small quantities, with food of a flatulent or cold nature, and by persons who require a gentle stimulus. All the varieties of pepper, as well as cloves, garlick and onions, are heating and stimulating, and should, therefore, be used sparingly, especially by persons of a full habit, and those disposed to inflammatory diseases. The best aromatic condiments for frequent use are cinnamon, carraway, ginger, and mustard. Ginger is one of the most agreeable and wholesome spices.

I shall now make a few brief remarks on *Cookery*.

It is certain that simple cookery is a useful art. By it our food is rendered more palatable and digestible, and more conducive to health. It includes the following modes of dressing meat:—1. Roasting. 2. Broiling. 3. Boiling. 4. Stewing. 5. Frying. 6. Baking.

1. *Roasting* was certainly the first mode invented to prepare animal food; for boiling is a more complicated process, and required the art of manufacturing vessels that could withstand the effect of heat. It is an excellent method of rendering food wholesome and nourishing, as, without greatly changing the chemical properties of meat, it renders it more tender, sapid, and highly flavoured, whilst there is not so much dissipation of its nutritive juices as in baking, boiling, and some

other processes. It is important to observe, that unless meat be kept after it is killed till the fibres begin to lose their firmness and tension, it will not become tender by roasting. The perfection of roasting consists in *doing* the meat neither too slowly, so as to wither it, nor too rapidly, so as to burn it. A small joint is best roasted on a string, by means of the bottle-jack; a large joint requires the spit. Our meat in England is generally over-done, and particularly over-roasted. In regard to over-roasting, the action of fire, if continued too long, has a tendency to change mild animal flesh into something of another quality; the fat, in particular, becomes bitter and rancid. The process is carried far enough when the steam of the meat puffs out in jets towards the fire, as this steam comes from the interior of the joint, and makes its way through the brown crust.

2. *Broiling* is an excellent mode of dressing animal food. It is a slight variation of the process of roasting, and though it may appear to differ but little, there is a very considerable difference of effect. In roasting and baking, it requires some time to form an incrustation on the surface of meat; but in broiling, the quick application of a brisk heat very speedily frees the outside fibres from their watery juices, and a crisp coating of fibre and fat is soon produced. This crust presents a strong barrier against the escape of the juices from the interior, which are more suddenly expanded than in the slower process of roasting, and, of course, must produce a more violent separation of the small fibres from their several bundles. The effects, however, are chiefly mechanical, for there does not appear to be the same chemical union of the several substances as is observed in roasting; and it is found, that broiled meats contain more uncoagulated albumen, gelatine, and other uncombined chemical principles, than if it had been either roasted or boiled. It is this that renders broiled meat more juicy and sapid than when roasted, and it must also make it more wholesome and nutritious. For restoring the strength of invalids, it is the best mode in which animal food can be dressed, both from its nutritive qualities, and from its being easily digested, as the juices are so slightly altered, that they require little preparation to convert them into good chyle and healthy blood.

3. *Boiling* is also a useful mode of preparing some kinds of animal food, rendering it more soluble, without destroying, if properly done, its nutritive qualities. Some professional men seem to consider it a method of cooking peculiarly calculated for weak stomachs, but this certainly is a mistake; for, in general, boiled meat is neither so easy of digestion, nor so nu-

tritious, as that prepared by either of the two foregoing processes. Boiled beef is inferior to roast, in every point of view, and boiled mutton, though a milder food, especially for invalids, cannot be considered so wholesome as when roasted. Boiling is not at all calculated for game, turkey, nor for any young and tender meat.

Boiling is, however, particularly applicable to vegetables, rendering them more soluble in the stomach, and depriving them of a considerable quantity of air, so injurious to those of weak digestive powers. Very striking and unexpected effects are sometimes produced from the boiling of vegetables, as in the case of several plants which are very acrid, and even poisonous, in a raw state, becoming bland, sweet, and wholesome, by simply boiling them in water. The potatoe is a familiar example, being, in its raw state, nauseous and unpalatable, perhaps even in a slight degree poisonous, as it is one of the night-shades *(solanum tuberosum)*, but when dressed, it is rendered farinaceous, digestible, and wholesome. A more striking instance still is the cassava, *(jatropha manihot)* of America, which is strongly poisonous before it is boiled, and afterwards is highly nutritious. The prepared cassava is well known in this country under the name of tapioca, and forms the basis of an excellent and nutritive farinaceous pudding.

4. *Stewing* has a similar effect to boiling, in depriving the meat of much of its best juices, and other nourishing properties, which are washed out of the fibres by the constant entrance and recess of the water during the process. Stewed meat is also still less easy of digestion than that which is boiled, and, therefore, it is a mode of cooking that cannot be recommended as fit for frequent use, although it may be useful on certain occasions.

5. *Frying* is one of the worst modes of cookery, as it cannot be performed without the use of fat or oil, two things which are highly objectionable, and because it renders the meat very indigestible. It injures the digestible and nutritive qualities of vegetables as well as those of animal food. Potatoes when fried, become waxy in texture, and will often produce derangement, even in healthy and vigorous stomachs.

6. *Baking* is a process to be preferred to frying, but is not so excellent as either broiling or roasting. It differs from roasting in not permitting the escape of the vapour exhaled from the meat. There is a greater retention of the oleaginous juices of the meat, which are generally in a burnt empyreumatic state, rendering the food less digestible and nutritious. Yet baked meat, when carefully done, is sufficiently wholesome for occasional use.

Besides these various simple modes of preparing animal food, there is another, which it may here be proper to take notice of, namely, when animal food is dissolved in water, and formed into a gelatinous solution or jelly. This substance is of a viscid nature, and though it contains much nourishment, yet is not easy of digestion, and of course less calculated for diseased or weak stomachs than is commonly imagined. Nor are those *jellies*, which are the mucilaginous extracts of certain parts of animals, as hartshorn, very digestible. They should be taken sparingly, and can only be recommended for the sick, accompanied with a quantity of stale bread.

The above are the principal modes of simple cookery; but the ingenuity of man has been exerted to discover a number of other preparations, which may with great propriety be arranged under the head of refined or compound cookery,—a system more flattering to the palate than favourable to the health. As it is impossible to speak of this system with any degree of approbation, I shall merely observe, that the generality of ragouts, made dishes, and the like, are difficult of digestion, and very liable to derange the functions of the stomach and intestines, and, therefore, cannot be too sedulously avoided by those who entertain any anxiety for the preservation of their health.

OF REGIMEN.

The term *Regimen*, strictly speaking, signifies any rule, but in the present work I mean by it chiefly, a proper regulation of the following means of promoting health, viz. 1. Air; 2. Exercise; 3. Sleep; 4. Clothing; and 5. The government of the passions, each of which I shall briefly consider.

1. *Of Air.*

It is an undoubted fact, that though man may live without food even for several days, he can hardly exist for a few moments without breathing atmospheric air, a sufficient proof of its pre-eminent importance, not only to life but also to health. For breathing does not merely preserve life, but likewise restores the florid colour, stimulus, and, so to speak, the life of the blood, thereby rendering it fit to maintain and increase the general energies of the body, and to repair some of its most essential parts. By the same means, the natural heat or temperature of the body is kept up, and substances destructive to health and life are got rid of. These considerations prove, that persons who are much confined to the house must have poorer blood than those who are in the habit of being abroad

in the open air, and will, therefore, *cæteris paribus*, be universally found to be weaker in body and mind, more liable to the accession of chronic or acute disease, and less able to struggle effectually under such attacks.

In health, nothing is more essential than for a person to breathe the fresh air at least once or twice a day, for an hour or two at each time. In large towns or cities, in particular, no day should be suffered to pass over, without enjoying the pure air beyond its boundaries, and that neighbourhood where the air is dry and moderately cold ought to be most frequently visited. Such exposure is the only way of guarding against too much sensibility in regard to the impressions and variations of the weather, one of the most abundant sources of disease, and an evil which is now very generally felt in this country. We should not go abroad too late nor too early. In the winter, after eight in the morning and before four in the afternoon, is the best time; in the summer after seven and before seven.

Night air is very unwholesome; and often about sun-set it is particularly injurious, on account of a greater quantity of dew falling at that time, than at midnight. In hot countries, those who wish to save their life cannot too sedulously avoid the evening and night air.

Infants and young children are much injured by being confined within doors, and it is well known that the mortality among them in large towns and cities, owing to the deteriorated state of the atmosphere, is much greater than in the open country. If freely exposed to the outward air, they are found to be little more sensible to the injuries of the weather than young cattle. All school-rooms and nurseries should be spacious, and well ventilated throughout the day. To cover children's faces when they are asleep is a very bad custom.

In sickness a constant supply of fresh air is extremely valuable. Whatever the nature of the complaint may be, and whether of an acute or chronic character, the patient's apartment should be spacious and freely ventilated. In all fevers it is of the first importance, and in protracted maladies will be found a powerful auxiliary to the other means used for the patient's restoration. In its absence, all other cordials often have but a very partial effect. No sick person should ever sleep with the bed curtains drawn; indeed, this is a most pernicious custom to all delicate persons, and one that cannot be too soon banished from the houses of all those who value the preservation of health.*

* A correct idea may be formed of the injury likely to follow this habit by the following facts. Eighteen charity children, and a servant, slept in an apartment of a house in King Street, Golden Square, when, to render the room warmer, they shut up the chimney, and used every other means to exclude the fresh air; the consequence

2. *Of Exercise.*

Of the means of preserving and promoting health, exercise is, perhaps, that which has hitherto had the least justice done to it by any individual author. Within the last five or six years, indeed, gymnastic exercises have come into frequent use, and have been found very useful, and most people are in a measure aware of some of the advantages of exercise, but the public at large are still far from having attained to any correct and adequate knowledge of its uncommon power, both in preserving health, and assisting in the cure of disease.

The body of man is evidently formed for activity and exertion. By labour or exercise man preserves his health, augments his strength and improves his mental faculties, beside procuring the means of his subsistence, and the conveniences of life. In regard to health, none of the various processes connected with the important function of digestion could be properly or adequately performed, unless the body were stimulated for that purpose by labour or exercise. The health of all the parts, and the soundness of their structure, depend on perpetual absorption, and perpetual renovation; and exercise by promoting at once absorption and secretion, invigorates life, without hurrying it; renovates all the parts and organs, and preserves them apt and fit for every office they have to perform. It also mainly contributes to the circulation of the blood, and to the increase of strength.

But by this means disease may often be prevented, and not unfrequently cured, even when it has taken a very strong hold of the constitution. It has been justly said, that if only some of the many advantages resulting from exercise, were to be procured by any one medicine, nothing in the world would be in more esteem, or more anxiously sought after. Generally speaking, a sedentary life is the source of all those diseases which physicians call cachectic or chronic, the number of which is now very considerable. Among these, scrophula, indigestion, bilious and liver complaints, lowness of spirits, nervous irritability, and pulmonary consumption, stand foremost, and there may be added to them jaundice, growing out of the shoulder and curved spine, palsy, apoplexy, &c. For these, exercise is one of the most effectual, as well as most agreeable, remedies; it strengthens the vessels, preserves the fluids in a healthy state, augments the appetite, facilitates the secretions, exhilarates the spirits, and excites pleasing sensations through-

of which was, that the servant, and ten of the children, were seized with various alarming symptoms of a disorder nearly similar, accompanied with excruciating pains, convulsions, &c.

out the whole system. I would, therefore, earnestly recommend exercise to the notice of my readers, both as a means of preserving health, and curing disease and deformity.

Exercise is of various kinds, but the principal are *gymnastic exercises*, *walking*, *riding*, and *friction*.

The most useful gymnastic exercises are leaping, throwing the discus or quoit, playing with the foot-ball, and fencing; and it is highly desirable that they should be frequently practised, and encouraged to the utmost extent.

There is no exercise so natural to us, or in every respect so conducive to health, as walking. It is the most perfect in which the human body can be employed; for by it every limb is put in motion, and the circulation of the blood is effectually carried on throughout the minutest veins and arteries of the system. The most proper time for walking, and indeed for all exercises, is between breakfast and dinner, and it should then be continued for two or three hours, supposing we rest for a few minutes during that period, so as not to become overfatigued.

Riding on horseback also is a most useful exercise, more especially for invalids. It has been laid down as a rule, that *riding is the best exercise for regaining health, and walking for retaining it;* and I think it is a very good one. This rule, however, does not prohibit the invalid from walking daily, but only inculcates that to him horse exercise is preferable in the beginning, as the chief mode of exercising the body.

Friction is a mode of exercise of great value, and highly worthy the attention of all persons, whether in health, or labouring under disease; because when more active exercise can be freely taken, it augments its good effects, and may be used locally so as to act beneficially on particular parts, and when active exercise cannot be resorted to, friction will be found the best substitute for it, and that which often most effectually paves the way for it. It has great power in strengthening the digestive organs, promoting a free perspiration, resolving obstructions, loosening contractions, and imparting a comfortable glow and an increase of energy to the whole system. Thus it is uniformly of remarkable service to the gouty and rheumatic, to the paralytic, the weakly, and the nervous, in short, to all persons afflicted with any chronic disease, or suffering under a state of general debility. I have known it of great service in promoting sleep, especially in persons enfeebled by literary labours, or close confinement to the house from any cause. If sleep forsakes the invalid, he should rise from bed, and use friction actively all over the body fifteen or twenty minutes, or more.

Friction may be applied to the body by the hand, or with

flannel, rough woollen gloves, or the flesh brush. The latter is by far the best instrument, and the proper time for using it is in the morning and evening, continuing it from fifteen to thirty minutes at each time.

Beside the preceding modes of exercise, the use of the shuttlecock and dumb-bells is deserving of much regard. The shuttlecock is a most excellent species of exercise, more particularly for ladies, both young and old, because it can be used almost at all times, and when females may not be able to use so much riding or walking as is necessary for health.

3. *Of Sleep.*

Refreshing sleep is universally known to be a powerful restorative, and it should, therefore, be studiously cultivated by all persons. The advantages of sleep are, that by it the exhausted constitution is repaired, and the vital energies restored; the process of assimilation or nourishment goes on more perfectly; perspiration is promoted, and thus much acrid matter is expelled; the vigour of the mental faculties is renewed, and the body attains its proper growth. Such being the salutary effects of this "sweet restorer," we immediately perceive the propriety and value of the late Lord Mansfield's advice to *cultivate sleep*, advice that I would strongly urge upon every individual, and especially on those who have much bodily or mental labour to undergo.

The number of hours necessary for sleep, varies from six to eight in the twenty-four; many strong persons finding six hours sufficient, while the weakly, and the invalid, generally require seven hours and a half or eight hours. It is worthy of particular remark, that even the weakly very seldom require more than nine hours sleep at the utmost, and a longer indulgence will scarcely ever fail to injure them. Half-past ten is the best time to retire to rest at night, and six or half-past six the best hour, in general, for rising in the morning.

In order to insure comfortable sleep, it is necessary that sufficient exercise be taken in the day; that the food, particularly in the evening, be moderate in quantity, and easily digested; the bed chamber freely ventilated; the bed clothes moderately light; and the mind free from much disturbance. It is a most pernicious practice to endeavour to stop every crevice in a bed room, so as to exclude the external air; and on this account the curtains of a bedstead ought never to be drawn around it. When persons have their sleep much disturbed, it is often owing to improper management, and from being ignorant of the means to be used to promote sleep. These means are various, but it being necessary to confine this volume within a certain size, I

am prevented noticing them particularly; the reader will, however, find them fully described in the "*Sure Methods of Improving Health, by Diet and Regimen.*" The use of the flesh brush on going to bed, and keeping the body cool, and the feet warm, are grand means of promoting sleep.

4. *Of Clothing.*

Some of the principal rules regarding the use of clothing are, 1. That our garments should be made of soft and pliable materials, so as not to obstruct the free and easy motion of the limbs. 2. They should be made of such a shape as to be comfortable from their ease. 3. They should not be warmer than is necessary to preserve the body in a proper degree of temperature. 4. The clothes we wear, more especially those next the skin, should be made of substances easily cleaned when necessary. 5. They should be suited to the constitution and age of each individual. Robust and young persons need only a small quantity of clothes, and those of a lighter sort, but the delicate, and especially those who are far advanced in age, require warm clothing. 6. A variety in regard to clothing is necessary, so that it may be adapted to the great difference of temperature in summer and winter. But the weakly ought to be careful not to make too great a change in the summer, more particularly in the evening. Invalids should rarely make such change in this respect till May is out.

The articles used for clothing are chiefly linen, cotton, and woollen goods. The different uses of linen and cotton are now generally known; but the proper age and circumstances in which flannel, and other fabrics of wool, ought to be used, are not so well understood by the public. Much diversity of sentiment has prevailed on this subject, but the majority of the most able professional men believe that childhood and old age are the proper periods for the use of this valuable species of clothing; and that to persons of all ages who are afflicted with consumption, or any complaint in the chest, or rheumatism, severe indigestion, diarrhœa, dysentery, colic, or diabetes, it is of essential service. In regard to age, flannel is well adapted to infants and very young children, but of course all extremes, in point of quantity, must be avoided. The celebrated John Hunter's receipt for rearing healthy children, was "Plenty of milk, plenty of sleep, and *plenty of flannel.*" In later years, the *flannel age* may be said to commence at forty-five, and after that period, the use of flannel becomes still more and more necessary as age advances. To all aged persons it is of eminent utility.

In respect of disease, or tendency to disease, it is of great value to those afflicted with consumption, and severe cough, or asthma, or a tendency thereto, and likewise to those who have weak stomachs, or are subject to rheumatism, or are naturally of a delicate constitution. All such persons should wear a flannel shirt or waistcoat, either next the skin, or immediately above the shirt. In the winter, it ought to be almost invariably next the skin; but it should generally be thrown off in bed.

The great use of flannel next the skin is, that it promotes the insensible perspiration, and defends the skin against the injuries likely to arise in our climate, from the frequent, great, and sudden changes in the weather.

5. *Of the Passions.*

It is certainly of great consequence, as it respects the health of the body, to possess a command over the passions of the mind. All physicians agree, that the passions, if given way to, have a strong tendency to exhaust the finest of the vital powers; to destroy, in particular, digestion and assimilation; to weaken the vigour of the heart, and the whole nervous system; and, by these means, to impede the important business of restoration. All that I have to say on this subject here, is to put my readers in remembrance of this fact, and to assure them, that a perfect command over the passions may always be gained by resolute exertion and earnest prayer. We may safely assert, with an eminent clergyman of former days, who well understood the way to present and future happiness, that *prayer and pains* will accomplish all things necessary.

OF BLOOD-LETTING.

Blood is in many respects the most important fluid of the animal machine. From it all the solids are derived and nourished, and all the fluids are secreted; and it is hence the basis or common pabulum of every part. These facts are quite sufficient to convince us, that the abstraction of this important, and, as some have called it, living fluid, can never be a matter of indifference to the welfare of the system from which it is taken; whether the system be strong or weak, healthy or diseased, the loss must either be beneficial or injurious, and, therefore, bleeding should not be resorted to on trifling occasions, and never without the advice and sanction of an able professional man. It is far too common a practice for individuals to submit to the loss of blood from the advice of a neigh-

bour, or other ignorant persons, or from some crude notion of their own as to its usefulness and necessity; and even many medical men are much too fond of the use of the lancet, and too indiscriminate in its employment, especially in chronical diseases.

Blood-letting is proper at the beginning of all acute inflammations, as inflammation of the stomach, lungs, intestines, pleura, kidneys, throat, &c. It is also necessary when there is too great a quantity of blood in the body: and when some cause supervenes, or is threatened in the constitution, which would speedily produce an inflammation, or some other dangerous symptom, if the system was not relieved by this means. It is upon the latter principle that patients are bled after wounds and bruises; that it is directed for a pregnant woman, if she has a violent cough with much feverishness; and, by way of precaution, in several other cases. It is likewise highly proper in the commencement of inflammatory, bilious remittent, and yellow fevers.

Occasionally, acute inflammation supervenes in diseases of debility, or in habits debilitated by previous diseases, when the employment of the lancet requires great caution and discernment; but with the exception of these cases, to determine the presence of visceral inflammation, and the propriety of both general and local blood-letting, is the same thing. In such cases, the repetition of the bleeding must be regulated by the effects of that which has been employed. If the symptoms return with diminished violence, a smaller bleeding will be sufficient; if with equal violence, an evacuation equal to the first will be necessary; and if with increased violence, we must still proportion the evacuation to the state of the symptoms; and the quantity of blood which is sometimes lost without fatal effects, in inflammation of the viscera, is astonishing.

With respect to the quantity of blood taken at each bleeding, in an adult of ordinary vigour, labouring under inflammation of an important organ, fourteen ounces is a moderate general blood-letting; a moderate local blood-letting by leeches or cupping, is from four to six ounces; and both will be the more effectual the earlier they are employed, and the more quickly the blood is taken.

On the contrary, in all cases of debility, bleeding is, for the most part, improper and injurious, and when circumstances render it advisable in such cases, the quantity of blood abstracted ought to be small. Generally speaking, bleeding should never be practised in the following circumstances, unless for some peculiar and very strong reasons, of the due force

of which none but skilful medical men can judge: viz. 1. In very advanced age, or very early infancy; 2. In persons naturally of a weakly constitution, or who have been rendered delicate by sickness, or some other accident; 3. When the pulse is small, soft, feeble, and intermitting, and the skin pale; 4. When the limbs, and the extreme parts of the body are often cold, puffed up, and soft; 5. When the appetite has been very small for a long time, and the food, consequently, only slightly nourishing; 6. When the stomach has long been disordered, and the digestion bad, whence little blood could be spared; 7. When the patient has been considerably reduced, whether by hæmorrhage, looseness, or profuse urine or sweat; 8. When the patient has long been afflicted with some depressing disease. In all these cases, and in some others less frequent, a single bleeding often precipitates the patient into an extreme state of debility, and a condition absolutely incurable.

To the consumptive patient, I have no doubt that bleeding generally proves injurious, by the weakness which it aggravates or occasions. Consumption is strictly a disease of debility, and if ever blood-letting be applicable to this malady, it is only in the very commencement of the florid species, which occurs in young persons of a full habit and florid complexion; but even here there is always so great a delicacy of constitution and irritability of fibre, although masked by a blooming appearance, as will not bear the subtraction of more than a very small quantity of this precious fluid.

It was formerly a very common practice to bleed insane patients freely; but all skilful persons are now aware of its injurious tendency. It has been correctly said, that in madness bleeding lowers the physical force, without, in general, correcting the mental error. It weakens the external expression, without impairing the internal strength of the disease. It converts the fury of madness into the passive sullenness of melancholy.

Persons so constituted as to make much blood, should carefully avoid all those causes which tend to augment it, especially an indulgence in animal food, wine, and strong malt liquors; and when they are sensible of a considerable increase in the quantity, they should confine themselves to a light, frugal diet, on pulse, fruits, bread and water, sleep but very moderately, and take much active exercise. Nothing can be more opposed to reason and experience, than for such individuals to have recourse occasionally to the abstraction of blood by the use of the lancet, or cupping glasses, in order to prevent too considerable a formation and flow of this fluid; for habi-

tual blood-letting invariably begets, under such circumstances, habitual plethora, which calls incessantly for a repetition of the same supposed remedy. Some persons are in the habit of being bled every spring or fall, or at both these seasons; but however robust the constitution, this is not a practice to be recommended, since, like all other continued bleedings at stated periods, it proves only a palliative remedy, which sooner or later greatly enervates the whole body, deranges its functions, induces a premature old age, and calls for a more frequent recourse to the operation.

Blood-letting is either *general* or *local*. General blood-letting is performed by a lancet, and consists in opening a vein, or the temporal artery, with a view of lessening the whole mass of circulating blood; local or topical blood-letting is performed, either by means of a cupping-glass and scarificator, or leeches, applied in the vicinity of the disease, for the express purpose of lessening the quantity of blood in a particular part.

The mode of bleeding most frequently practised is that of opening a vein; and it may be done in the arm, ancle, jugular vein, frontal vein, veins under the tongue, or the back of the hand, &c. In whatever part, however, venesection is performed, it is always necessary to compress the vein, between the place where the puncture is made and the heart. Thus the return of blood through the vein is stopped, the vessel swells, becomes conspicuous, and, when opened, bleeds much more freely than would otherwise happen. Consequently, in bleeding from the arm, leg, hand, or foot, the bandage is applied above the puncture; while in bleeding from the jugular or frontal vein, the means for making the necessary pressure is applied below it. When the external jugular vein is to be opened, the surgeon generally makes the necessary pressure with his thumb.

All the apparatus essential for blood-letting on the part of the patient, is a bandage or fillet, two or more small pieces of folded linen for compresses, a basin to receive the blood, and a little clean water and a towel. On the part of the surgeon, it is necessary to have a good lancet of proper shape. He should never bleed with lancets with which he has been in the habit of opening any kind of abscesses, as very troublesome complaints have been the consequence of doing so.

In bleeding in the arm, the bandage is to be tied round the limb, a little above the elbow, with a sufficient tightness to intercept the passage of the blood through all the superficial veins; but never so as to stop the flow of blood through the

arteries, which would tend to prevent the veins from rising at all. The veins being thus rendered turgid, the operator should choose the one which seems most conveniently situated for being opened, and large enough to furnish as much blood as it may be proper to take away. Before applying the bandage round the arm, however, the operator should always feel where the pulsation of the artery is situated, and, if equally convenient, he should not open the vein immediately over this part.

With respect to the choice of a vein in the arm, the most experienced surgeons give the preference to one which rolls least under the skin. Such a vessel, though sometimes less superficial than another, may commonly be opened with greater facility. The vein, however, is always to be fixed as much as possible, by the operator placing the thumb of his left hand a little below the place where he intends to introduce the lancet.

In fat subjects, the large veins at the bend of the arm are sometimes totally imperceptible, notwithstanding the fillet is tightly applied, the limb is put into warm water, and every thing done to make those vessels as turgid as possible. In this circumstance, if the operator has not had much experience in the practice of venesection, he will do well to be content with opening one of the veins on the back of the hand, after putting the member for some time into warm water, and applying a ligature round the wrist.

Now and then it will happen, that an inflamed and swollen state of the parts in the neighbourhood of the puncture will take place, even when the operation has been skilfully performed, and with a clean lancet, and occasionally the inflammation will extend a considerable distance down the arm; when it will be necessary to keep the limb perfectly quiet in a sling, to dress the puncture of the vein with some mild simple salve, as the saturnine ointment, page 118, to cover the whole surface of the inflammation with linen, wet with the cooling lotion, No. 68, page 113, and administer some gentle aperient medicine, as No. 73, page 114. These means are generally sufficient to remove such inflammation, but if not, skilful medical advice should be obtained without delay.

OF SUSPENDED ANIMATION.

A total suspension of all the mental and corporeal functions may arise; 1. From suffocation, produced by hanging or drowning; 2. From the inhalation of carbonic acid, or some other noxious and irrespirable exhalation; 3. From a stroke of lightning or electricity; and 4. From intense cold.

In death from hanging or drowning, the face is turgid and

suffused with livid blood, especially in the former case; when it arises from the inhalation of irrespirable gases, the countenance is pallid; when from a stroke of lightning or electricity, it is also pale, the limbs being flexible, and the blood incoagulable; and when produced by intense cold, it is pale and shrivelled, and the limbs rigid.

In the first variety, or *asphyxia from hanging or drowning*, the chief immediate cause is suffocation, or a total obstruction to the respiration. Some physicians have considered apoplexy to be the principal cause of death in hanging, and others have said, that it is owing to the dislocation of one of the vertebræ of the neck, which in being driven out of its place presses upon the spinal marrow, and thus insures immediate dissolution; but these opinions are now clearly ascertained to be erroneous, and the great majority of professional men of the present day, regard the obstruction to respiration to be in all instances the chief, and in very many examples, the only cause of death, both in hanging and drowning. In hanging, the aperture of the windpipe is closed against the entrance of air by the pressure of the cord round the throat, and in drowning by a rigid spasm of its muscles. In drowning, it was formerly supposed that the suffocation was produced by a rush of water into the cavity of the lungs, but it is now well ascertained, that in many cases of death from submersion, not a drop of water enters into the lungs; that where it does enter, the quantity is, for the most part, very small; and that whether small or large, it passes the windpipe after death instead of before it, and consequently cannot be a cause of death.

In the second variety of suspended animation, or *that from an inhalation of noxious vapours*, death in many cases takes place instantaneously, and from an utter destruction of the irritability and sensibility of the nervous system. In this case, there is not only a cessation of the action of the heart from the want of the necessary stimulus of the blood afforded by the lungs, but there seems a total abstraction of the nervous power, and this as completely in one part of the frame as in another.

The most fatal gases of the description before us, are the carbonic acid, hydrogen, nitrogen, and several of a more compound kind, which are thrown forth from putrefying animal and vegetable substances, and especially from cemeteries, on opening fresh graves. The most common of these gases is the carbonic acid, which is chiefly found as a suffocating vapour in close rooms where charcoal has been burnt, at the bottom of large beer casks or wells, in cellars where a large quantity of wine or other liquors are in a state of fermentation, and in many natural caverns in the earth's surface. As it will not

support flame, the common and easiest test, where it is suspected to exist, is that of a lighted candle, which is well known to be extinguished immediately, if this gas be present in a quantity sufficient to be injurious to respiration.

In the third variety, the whole system appears not so much rendered inirritable to stimulants, as to be suddenly exhausted of its entire stock of nervous power, like a Leyden phial upon an application of the discharging rod; in consequence of which the limbs are flexible, and the blood does not coagulate.

Asphyxia from intense cold is always preceded by an insurmountable desire to sleep, which the utmost exertion of the will is unable to overpower. The sleep is, in most cases, fatal, and becomes the sleep of death. Extreme cold being one of the most formidable sedatives, carries off the heat of the body far more rapidly than it can be recruited, exhausts it of its irritable and sensible power, and death thus insensibly takes place.

Treatment. *Of suffocation by drowning.* Here the two grand means by which we are to operate are those of warmth and inflation of the lungs. The body should be immediately and quietly conveyed to a warm and dry situation, and rubbed all over with moderate stimulants, as flour of mustard mixed with an equal quantity or more of common flour, or some warm embrocation, as soap or camphor liniment, with a small portion of oil of turpentine; while the nostrils are plied with volatile ammonia, and the eyes exposed to a strong light. But as a restoration of the action of the lungs is chiefly and directly to be aimed at, a full expiration of warm air from the lips of a by-stander should be repeatedly forced into the patient's mouth, and his nostrils held close to prevent its escape by that channel. Inflation may also be attempted by a pair of common bellows; or which is far better, if it can be readily procured, by a pair of bellows communicating with a pipe introduced through the nose or mouth into the windpipe, or, as some have judiciously recommended, into an aperture made between the rings of the windpipe. If the lungs cannot be fully inflated by the other means advised, this aperture in the windpipe should invariably be made, and without much loss of time, since effectual inflation is more certainly secured by it than any other method, and the operation, if carefully performed, is quite safe. Injections of assafœtida and oil of turpentine, or other stimulants, mixed with warm water, should at the same time be thrown into the rectum; and, if it be possible, some warm and cordial stimulant, as volatile tincture of valerian, volatile alkali, brandy, or the compound spirit of lavender, should be conveyed into the stomach by means of a canula or catheter; or what may pro-

bably in this case answer better, by a piece of sponge impregnated with one of these fluids, fixed to the end of a small rod of whalebone; for the sides of the stomach may be, so to speak, mopped round by the sponge thus charged, and stimulated in every direction. Phosphorus is a very powerful stimulant, and if the foregoing stimulants fail of success, it should be given to the amount of two or three grains for a dose, dissolved in ether.

Blood-letting was formerly recommended by many able physicians, and is still a common resource with the unthinking and less able part of the profession, but a very large majority of the best informed practitioners of the present day dissuade from its employment in the first instance. If the drowning has followed upon a sudden fit of apoplexy (a rare case), the recommendation is rational enough, provided it can be practised with effect; but in the generality of instances, blood-letting is certainly a mean of little efficacy, even where it is applicable, and where it is not, it cannot fail to be injurious. It must not be forgotten, that it is one of the most direct and powerful means of lessening the heat of the body, and the force of the vital principle, and is, therefore, clearly opposed to the object which we have to accomplish in the present case. It ought never to be resorted to unless by the direction of an intelligent medical practitioner.

A few years since it was also the practice to administer tobacco injections, either in the form of infusion or smoke, but this is now universally and justly condemned; for tobacco being a powerful narcotic and sedative, has, like blood-letting, a direct effect in depressing the energies of life, and is, therefore, invariably injurious under the present circumstances.

Returning life is first usually discoverable by the symptoms of sighing, gasping, twitching, slight palpitation, or pulsation of the heart; in effect, by a weak action in most of the organs. Our efforts should here be redoubled, for the feeble spark still requires to be solicited and nourished into a permanent flame, and has often disappeared from a relaxation of labour. A spoonful or two of warm wine, or wine and water, should now be given by the mouth, as soon as the power of swallowing is sufficiently restored; which should be shortly succeeded by light, warm, and nourishing food of any kind, with a well-heated bed, and perfect tranquillity.

In attempting the recovery of *those who have hung themselves*, the same means are to be resorted to. Here bleeding from the jugular vein may be more frequently found necessary than in attending the drowned, since in hanging there is a greater tendency to apoplectic symptoms than in drowning: yet even here

the quantity abstracted need not be large, and should rarely exceed six or eight ounces.

How long the living principle may, under the foregoing circumstances, remain attached to the animal frame, and afford a chance of recovery, is not ascertained with any degree of accuracy, but I believe it exists in many instances longer than is generally supposed; and there are some undoubted cases of recovery, both from drowning and hanging, after such a lapse of time as ought to teach us the useful lesson of the necessity of not despairing too early. If the submersion have not exceeded five minutes, persons will be usually found to recover without much difficulty. After a quarter of an hour or twenty minutes, recovery is not common; and after half an hour, it is nearly hopeless. Yet of twenty-three instances of the recovery of drowned persons at Paris, one was restored to life after having been three-quarters of an hour under water, four after having been half an hour, and three after a quarter of an hour. Mr. Glover, a surgeon in London, relates the case of a man who was restored to life after twenty-nine minutes hanging, and continued in good health for many years after; but his exertions for the recovery of this person were continued unremittingly for four hours and a half, before any signs of returning life were visible.

In *a suspension of animation arising from the inhalation of noxious airs*, (see page 188) the patient, if any degree of sensibility remain, should be freely exposed to the open air, instead of to a heated atmosphere, as in the preceding variety; and if he can swallow, acidulous liquids, as lemonade, &c. should be given him. If insensible, cold water should be largely dashed on his face; strong vinegar, and especially aromatic vinegar, be rubbed about his nostrils, and held under them, and stimulating clysters of assafœtida, or oil of turpentine, &c. mixed with water, be injected. The lungs should be inflated with the warm breath of a healthy man, as advised under the preceding variety, or with oxygen gas. The inflation with oxygen gas is highly to be recommended.

But it appears that the employment of the concentrated chloride of soda, or of lime, is the most speedy and certain means of restoring persons who have been suffocated with carbonic acid gas, in any shape or combination, as it arises, for example, from burning charcoal, or from accumulated filth, or is encountered in descending into wells or cellars, or in opening extensive public sewers, &c. The patient should be brought into the open air, and a bottle of the concentrated chloride of soda, or of lime, held close to his nostrils, so as to cause him to inspire it, which should be continued until the patient has fully

regained his consciousness and the power of walking, which he should be kept doing for some time in the open air. Acidulated liquors may with propriety be given at the same time.*

A proper use of electricity is also, in many instances, found very serviceable. The fluid should be transmitted along the channel of the nerve, from the seat of the phrenic nerve in the neck, to the seat of the diaphragm, or that of the par vagum and great sympathetic nerve immediately under the sterno mastoid muscle. Little advantage is likely to accrue from passing the electric aura across the chest, directly through the heart and lungs, which is a common practice.

The general plan of medical treatment proper when *animation has been suspended from a stroke of lightning*, has been detailed under the first variety. Stimulants of the most active kind should be resorted to without loss of time, as volatile alkali, and the stimulating liniments at page 106, externally; and phosphorus, brandy, and volatile tincture of valerian, internally. But of all stimulants, that of electricity seems to be especially called for in the present case.

In the treatment of a person who has been so long exposed to *extreme cold*, as to be in a torpid and apparently lifeless state, great caution is necessary in the employment of warmth, since its too quick and free application will undoubtedly produce mortification, and endanger life. The body should be first rubbed all over with snow or very cold water, and after

* The relation of the following case will be interesting to all my readers, and may serve to impress upon their minds the value of the above *chlorides* in asphyxia, from inhaling carbonic acid gas. A workman of a vermicelli maker was exposed to a current of deleterious gas, which proceeded from an accumulation of filth and rubbish heaped together from a pit of night soil which was undergoing repair. He fell without consciousness. M. Labarraque was called to the patient soon after the accident: the symptoms were, pulse strong, but fugitive on pressure; excessive rigidity of the limbs; arms stretched, stiff and almost cold; head thrown backwards; veins of the neck turgid; face and lips violet coloured; eyes closed, dull and insensible; respiration appeared extinct; the danger seemed imminent; vinegar, æther, and strong ammonia, placed under the patient's nostrils, produced no effect. The sensibility could not be recalled. A napkin moistened in the solution was placed under the patient's nostrils, and in less than one minute he uttered an acute and plaintive cry or groan: the rigidity ceased; his eyes opened to shut again in a few seconds; the tetanic rigidity had re-appeared with its frightful train. M. Labarraque had withdrawn the *chloride* too soon. The usual stimulants again tried produced no effect. The *chloride* was re-applied: in less than a minute, the rigidity of the limbs ceased, and the patient sent forth a piercing cry, which was stopped by the linen impregnated with the *chloride*. A full inspiration took place, the air necessarily passing through the moistened linen, was therefore charged with *chloride* saturated with water. The disinfection of the gas contained in the chest was no doubt complete, since the symptoms ceased. He was made to walk in the street, keeping the *chloride* under his nostrils. Repose and the open air were afterwards prescribed, and the patient recovered his health as perfectly as before the accident. Another case of asphyxia from a similar cause, is related by M. Labarraque, in which the patient immediately recovered from adopting the same means, after forty-eight hours had elapsed since the commencement of the symptoms. In this instance the patient was not altogether insensible, although in a most deplorable condition.

active friction of this kind has been continued for a quarter of an hour, it should be wiped perfectly dry, and submitted to the friction of warm hands, several persons being engaged in the process simultaneously. The body ought not, in the first instance, to be brought into a warm room; but after the friction with cold water has been continued for the period specified, and the body been wiped dry, then removal will be very proper and necessary, and it should be laid in flannel. Warm air may then be breathed into the lungs, and a little lukewarm wine and water conveyed into the stomach. Persons who have been buried in snow for a considerable time, or so exposed to intense cold, as to be deprived of animation for some hours, have been perfectly restored by these means; and it would be highly criminal in any professional man to relax his exertions to recover such persons, until his efforts had been strenuously exerted without effect for several hours. I have reason to fear, that many lives have been lost, under such circumstances, from the want of information and perseverance on the part of those medical practitioners who have been called upon for assistance.

In the treatment of infants who have been overlayed, or otherwise suffocated by the carelessness or inattention of their nurses, and of persons who suddenly expire in convulsions, or fainting fits, precisely the same plan should be pursued as is laid down under the first variety, or suspended animation from drowning. Here, as in suffocation from drowning, the two grand agents of restoration are warmth, and inflation of the lungs; and if these means are resorted to with *judgment* and *perseverance*, many of such cases will terminate favourably which would be lost under a less vigorous and patient treatment.

OF INTOXICATION.

Very few persons are aware of the injurious effects resulting from a daily use of spirituous and other fermented liquors in large quantities, yet their destructive tendency is proved to a demonstration, by the visible effects produced on the minds and bodies of the unhappy victims of this base and demoralizing practice, and on animals who feed on the refuse of distilleries and breweries. Those persons who exceed a very moderate quantity of such drink, in a few years grow heavy and awkward in their gait, and bloated in their countenance; their complexion becomes bilious and sallow; their breath fetid; their eyes inflamed; their nose red and swollen; their appetite deficient and capricious, and their bowels irregular: and it is a remarkable fact, that hogs, fowls, and other domestic animals, when allowed to feed at pleasure on the refuse left after distillation and fer-

mentation in distilleries and brewers' yards, soon become diseased, their intestines and livers exhibiting a state of great enlargement and hardness. By a large quantity of these liquors is here meant, any portion that sensibly affects the head or stomach, and which renders the individual taking it uncomfortable, either soon after or on the succeeding morning. If a man, after partaking of strong liquors, is less able to transact any important and difficult business than he was before, he may be assured of having not only exceeded the bounds of prudence and moderation, but of having taken such a quantity as cannot fail to be more or less injurious to the stomach and bowels, the healthy action of which are of the first importance to our bodily comfort and happiness.

It is fully ascertained, that drinking freely of strong liquors, especially of ardent spirits, immediately deranges the stomach, intestines, and liver, three of the most important organs in the human frame, and, in many instances, a short continuance of this practice brings on indurations and positive disease in the structure of those parts. Such effects are more frequently induced by the daily indulgence in what is too often considered a small quantity of such drink than is generally imagined. This practice affects the teeth also very visibly, giving them a stained and foul appearance. General Norton, the Mohawk chief, who was in this country a few years ago, was asked by a professional gentleman concerning the state of the teeth among the Indians. His reply was decisive upon this subject. "When the Indians (says he) are in their own settlements, living upon the produce of the chase, and drinking water, their teeth always look clean and white; but when they go into the United States, and get spirituous liquors, their teeth look dirty and yellow; and I have often heard that they were frequently afflicted with the tooth-ache, and obliged to have their teeth drawn."

The state of intoxication is similar to that of incipient apoplexy, or palsy. Drunken men stagger, their tongue loses its power of speech, they stammer and see things double, and moving circularly. The mind is equally affected, and imbecility is the concomitant effect. All these symptoms of partial palsy arise chiefly from the pressure of the blood-vessels on the brain, which are then surcharged with blood. If the intoxication has arrived at its utmost height, there is no longer any difference between this and the true apoplexy, and the powers of sensation and motion are greatly impaired, if not entirely suspended. If, in this state, one of the smaller blood-vessels that press on the brain with unusual weight, should accidentally burst, he is in danger of instant death.

A person much intoxicated ought to be carried without delay into a room of moderate temperature, and placed in bed between the blankets, with his head raised, particular care being taken that his neck is no way twisted, or has anything tight about it. Indeed, all close bandages on the body should be loosed; and if the individual is desirous of drink, to quench his thirst, the simplest beverages will be the best, such as tea, or toast and water. A gentle emetic of ipecacuanha powder is always useful.

When, however, a man is found in a state of deep and alarming intoxication, with laborious breathing, cold extremities and other threatening symptoms, he should be immediately cupped in the back of the neck, or a few ounces of blood taken from the arm, his feet and legs put into warm water, and a sharp purgative clyster, as No. 8, page 97, administered without delay. The clyster may be repeated, if necessary, three or four times within a short period.

Baron Cramer, and a German physician of the name of Röth, have highly praised the following medicine as a valuable remedy for tippling and drunkenness. Dr. Röth says, that he has succeeded with this medicine in completely curing many poor creatures, both men and women, who were actually killing themselves by this practice. I hope that many in this country addicted to this baneful habit will try it, and find it effectual.

Take of tincture of columba, one tea-spoonful; tincture of cascarilla, one tea-spoonful; compound tincture of gentian, one tea-spoonful; infusion of quassia, a wine-glassful; elixir of vitriol, twenty drops.

Mix and take twice or thrice a day; and have a jug of cold water dashed over the head every morning on coming out of bed, and the feet bathed in warm water every night. Continue this for six or eight weeks.

Sometimes persons unaccustomed to drink strong liquors exceed the bounds of moderation, and become tipsy from the use of a small quantity of some fermented or spirituous liquor. Those of sober habits may, in an unguarded moment, be overcome in this manner, and for the benefit of such I would remark, that the water of ammonia often affords effectual and speedy relief in tipsiness. Twelve drops of the pure water of ammonia may be taken in a large wine-glassful of milk and water, or water, and if not effectual, it may be repeated in ten minutes after, and again in half an hour.

Dr. Plet relates the case of a young man of nervous and irritable constitution, who on the 15th of January, 1822, became so violently drunk, that he did the most indecent things, and broke every thing he could get at. When Dr. Plet saw him,

he was armed with a knife, and running at his parents, with his eyes glaring and his mouth foaming. Twelve drops of the water of ammonia were given him in a glass of sugar and water, and he was calmed immediately, ashamed and confused at his conduct.

OF THE MEANS OF PREVENTING THE GENERATION, AND CHECKING THE PROGRESS OF TYPHUS, AND OTHER MALIGNANT FEVERS.

In order to prevent the generation of malignant fevers, it is necessary to be acquainted with the sources of their contagion, and to avoid them.

Concerning the source of typhus and other contagious diseases, the most probable conjecture is, that each, though afterwards propagated by its peculiar contagion, is at first produced independently of contagion, by a concurrence of causes which rarely takes place. And when at any period, it happens that no person labours under the disease, it cannot be reproduced unless a sufficient quantity of the contagion is preserved in fomites, (substances impregnated with contagion,) or till the same causes which first gave rise to it again conspire. Thus contagious diseases may for a long time disappear, while a different combination of causes may give rise to others, which in like manner spread by their contagions.

The combination of a very few circumstances, and those of frequent occurrence, is sufficient to produce typhus fever. The most powerful of these are confinement in ill-ventilated and crowded places; uncleanliness of all kinds; the putrid effluvia of animal and vegetable substances; and innutritious and unwholesome food. Hence we find, that typhus frequently arises in hospitals, jails, transport ships, and the close and crowded habitations of the poor, where free ventilation has been little attended to; and it is evident, therefore, that the effluvia of the living body, become putrid by stagnation, are capable of producing it.

The confinement of the putrid effluvia is not always necessary for the production of typhus, for when the cause is sufficiently powerful, the whole air of a neighbourhood may be so loaded as to be capable of producing it. A malignant fever has been occasioned by the offal of a city being accumulated without the walls; and it has often happened that typhus has spread over the adjacent country, when the dead were left unburied on the field of battle.

Contagious diseases may spread, 1. By actual contact; 2.

Through the medium of the air; 3. By means of substances which have been in contact with, or near the sick.

Concerning the first of these little need be said. It is probable, that the larger the surface which has been in contact with the sick, and the longer it has been so, the less will be the chance of escaping infection.

The air appears to be the medium through which contagion, in most instances, is applied to the body. It is common for people to be infected in consequence of approaching the sick, without touching them, or any thing which has been in contact with them. It appears from a variety of observations, however, that the contagious atmosphere, that is, the air sufficiently impregnated with the contagion to produce the disease, extends only for a short distance around the sick, not only in typhus, but in scarlet fever and all other contagious diseases; certainly not above a few yards, probably not above a few feet.

Contagion, however, may be conveyed from place to place by the wind, and thus the disease may be communicated at a considerable distance. In proof of this, many facts may be adduced; one of the most striking on record happened on the 12th of May, 1750, at the Old Bailey. The prisoners were kept for nearly a whole day, in a small, ill-ventilated, and crowded apartment; some of them laboured under the jail fever. When they were brought into court, the windows at the end of the hall, opposite to the place where the judges sat, were thrown open; the people on the left of the court, on whom the wind blew, were infected with the fever, while those on the opposite side escaped. The lord chief justice and the recorder, who sat on the lord mayor's right hand, escaped; while the lord mayor and the rest of the bench, who sat on his left were seized with the distemper. Many of the Middlesex jury, on the left side of the court, died of it, while the London jury, who sat opposite to them, received no injury.

Generally speaking, hot weather, and damp foggy weather, is favourable, and cold weather unfavourable, to the spreading of contagious diseases.

The stools, especially if unusually fetid, are most apt to communicate the contagion to the air; next to these, the patient's breath; and then the effluvia from his body.

The last of the ways by which a contagious disease may spread, is by *fomites*, substances impregnated with contagion. Fomites often retain contagion for a great length of time, and may convey it to any distance. It is a general opinion, that fomites more readily communicate the disease, and communicate it in a worse form, than the sick themselves. Dr. Lind remarks, "I am convinced, from very extensive experience,

that the body of the sick is not so apt to communicate the infection, as the dirty linen, &c. which has been about him." Contagion adheres to the furniture and utensils employed about the sick, as well as to all kinds of clothes, and even lurks in the walls of the apartments where the sick have lain. Woollen materials and wood are thought most apt to retain it.

On the foregoing facts respecting the sources of the contagion of typhus and other malignant fevers, and the different ways in which they spread, are founded the means of preventing their generation, and many of the precautions employed for checking their progress; and it is obvious, that a careful consideration, and proper use of these facts, will lead to the employment of many of the most powerful means for accomplishing these most desirable purposes. Communication, and especially actual contact, with the sick, must be avoided; the patient should be lightly covered with bed-clothes; his chamber should be freed from all unnecessary furniture, and kept perfectly clean; his sheets and body-linen be frequently changed, and instantly taken out of the room; as should also the stools and urine.

Above all things, the chamber and adjoining apartments should be freely ventilated, by opening the opposite windows, or the windows and door; for it should be constantly remembered, that contagion sufficiently diffused becomes inert, and that without a free circulation of air in the apartments of persons ill with malignant fevers, even fumigation is useless. Next to the free admission of pure air, fumigation with the mineral acids is by far the most effectual means of checking the progress of contagious fevers. The nitric and muriatic acids appear to possess equal power; but the former is preferable where persons are unavoidably obliged to be present, as it is breathed with least inconvenience. The late Dr. Johnstone, of Worcester, and Dr. Carmichael Smyth, of London, are the physicians to whom we are chiefly indebted for the knowledge of the efficacy of fumigation, with the mineral acids, in destroying the contagion of malignant fevers. Dr. Smyth used the nitrous acid vapour as a fumigation, with the greatest success in the typhus fever which broke out in the year 1780, among the Spanish prisoners confined in Winchester Castle; and also in 1798, in checking the further progress of a very malignant fever which had made great ravages among the crews of the Russian ships of war at Sheerness. From the great value of this fumigation, Parliament voted Dr. Smyth 5000*l.* as a reward for the discovery.

The mode of obtaining the nitrous acid vapour is by decomposing nitre by means of heated sulphuric acid, which may be

done as follows: Put half an ounce of sulphuric acid, or best oil of vitriol, into a crucible, glass, or china cup, and warm it over a lamp, or in heated sand, adding to it, from time to time, a little nitre. Several of these vessels are to be placed in the patient's chamber, and the neighbouring apartments and passages, at twenty or thirty feet distance from each other, according to the height of the ceiling, and the virulence of the contagion.

The muriatic acid gas is obtained in the following manner. Put one pound of common salt into an earthen vessel, and pour over it from time to time a small quantity of sulphuric acid, till the whole salt is moistened. If the air is foul and peculiarly offensive, apply a gentle heat under the vessel, to extricate a larger quantity of vapour; but, in general, the simple addition of the acid to the salt will be found sufficient, unless the apartment be very large.

The most simple means of purifying houses and goods, is washing and exposing them to the air, and these are generally sufficient. It is common to wash, or what is better, to whitewash the walls of houses where the sick have lain; and to procure a free circulation of air, by opening the windows, and making fires in the house. The clothes, and other articles which have been in contact with the sick, should be washed and exposed to the air for a considerable time. In the different lazarettos of Europe, exposure to the air, for a certain length of time, is generally thought sufficient to purify merchandise, even from cities where the plague rages.

In the first and second editions of this work, the article on the means of checking the progress of malignant fevers terminated here, but very lately a most valuable discovery has been made of substances which have greater power in destroying putrid and offensive effluvia arising from animal and vegetable matter, than any means previously known, and these substances being of very extensive use, and capable of being applied with equal facility, economy, and success, I shall make a few observations respecting them in this place. The substances referred to are the chloride of soda, and the chloride of lime, and to M. Labarraque, an apothecary in Paris, the honor is due of having discovered their inestimable value, and of having freely communicated their composition, and the mode of applying them, to the public authorities of France, for the general benefit of mankind.* M. Labarraque's experiments have been of the most public and decisive nature, and have been carried on under the immediate inspection of some of the most

* The British public are much indebted to Mr. Alcock, of New Burlington Street, for publishing an ample account of the uses of these articles.

scientific and distinguished physicians, surgeons, and chemists, at the *Morgue*,* and in all the great hospitals at Paris; in the extensive workshops where catgut and other strings are manufactured from the intestines of animals, in a state of putrefaction; in the filthy and offensive public sewers, and in the lazaretto at Marseilles; from which it clearly appears, that the chlorides of soda and of lime possess striking and incontestible advantages over every other means yet employed for the destruction of noxious effluvia, and that they may be used with equal success in destroying the infection of putrid fevers, in purifying the wards of hospitals and sick rooms, in the disinfection of crowded ships and foul stables, in the prevention of putrefaction in bodies previously to interment, and in the disinfection of reservoirs of urine, in the purification of putrid water, in short, in the total destruction of every species of infectious effluvia, and offensive odour. It has been used with excellent effects in correcting the fetid discharges from foul ulcers, cancer, hospital gangrene, carbuncle, &c.

The council of health of the lazaretto at Marseilles have ordered that henceforth the above chlorides should be substituted instead of the acid fumigations, (described in the preceding page) for the purification of those afflicted with plague, or suspected of other infectious diseases, being convinced that they possess much greater efficacy than the latter, are more prompt in their effect, and cause no inconvenience either to the patients or attendants.†

Such being the manifest superiority of M. Labarraque's preparations, in arresting the progress of infectious diseases, I proceed to notice particularly the best mode of using them.

In typhus, putrid sore throat, measles, small-pox, and other infectious fevers, the apartment of the patient is to be freely sprinkled with diluted chloride of lime, twice a day, or oftener, if the disease be very malignant, or the apartment unusually confined. Sometimes it is advisable also to leave a small quantity, as a pint or two, exposed on a dish, or in a bason, in the sick chamber. And where many persons are living in the same house, or the disease is particularly rife, it may be proper to sprinkle the adjoining apartments and passages with the same liquid.

* The place where all the dead bodies found in the Seine, or in Paris, or its environs, are deposited for inspection, that they may be claimed or identified previously to interment.

† A corpse in full putrefaction for three days, and exhaling at forty paces around it the most fetid odour, has been instantly disinfected, and all unpleasant smell removed, by the solution of the chloride of lime. This was under the burning sky of St. Domingo, where putrefaction advances with prodigious rapidity, and is accompanied with the most intolerable stench. I mention it as a striking proof of the inestimable value of these substances.

Medical men and others, attending patients labouring under contagious diseases, should have a bottle of the diluted liquid always at hand, which they ought to take with them and respire whenever they approach the bedside of the patient, at the same time sprinkling some on the floor, and around the bed.

To make the diluted chloride of lime, one part of the concentrated chloride is to be mixed with thirty parts of water, that is, about half a pound of the concentrated salt to fifteen pints of water.

Ships which have been impregnated with contagious matter, are to be disinfected in the same manner, viz. by sprinkling their whole interior with the diluted chloride of lime, twice or thrice a day.

To prevent putrefaction in corpses previously to interment, one part of the chloride of lime is to be thoroughly mixed with forty parts of water, and the clear liquid poured off, and with this liquid the entire surface of the body should be freely sprinkled by means of a watering pot, or in any other convenient manner. This sprinkling should be repeated twice or oftener, daily, according to the temperature, degree of putrefaction, &c. Should putrefaction be far advanced, or the period the corpse is intended to be kept be considerable, it is better to surround the body with a sheet moistened in the solution, and to renew the moistening of it frequently. By these means all putrefactive odour in the apartment may be perfectly obviated.*

The chloride of soda may be used in the same manner, diluted with water in similar proportions, and with equally good effect.

It is proper to remark, that in no case ought the use of the chlorides to supersede strict attention to cleanliness, and a free ventilation of the apartments of the sick.

OF POISONS.

Poisons are naturally divided into three classes, viz. mineral, vegetable, and animal.

OF MINERAL POISONS.

The chief of the mineral poisons are the strong acids, as oil of vitriol, muriatic, nitric, and oxalic acids; the concentrated alkalies, as potash, soda, and ammonia; and the preparations of arsenic, copper, antimony, mercury, silver, nitre, and sal ammoniac.

* The corpse of Louis XVIII. was laid in state, without being closed in a leaden coffin, and freely approached by his people, without their being sensible of any disagreeable odour, at which circumstance many expressed their astonishment. This freedom from putrescency was the result of the application of the chlorides.

Strong Acids. The symptoms which quickly follow the swallowing of oil of vitriol, or any other strong acid, are acid burning, and excessively disagreeable taste; acute pain in the throat, stomach and bowels; insupportably fetid smell from the breath; frequent eructations, vomiting of various coloured matters, sometimes mixed with blood, producing in the mouth a great sensation of bitterness, effervescing when mixed with chalk, and reddening the tincture of turnsole or litmus; in general, copious evacuations more or less bloody; colic, and pains so acute, that even the weight of any clothing becomes insupportable; difficulty of breathing; frequent and irregular pulse; excessive thirst, yet drink augments the pain, and is shortly after vomited; the skin, particularly of the lower extremities, appears frozen; cold and clammy sweats; vain and repeated efforts to make water; impossibility of maintaining the same position; convulsions of the face and limbs. The intellectual faculties are rarely disordered. All these symptoms, however, are not always found in the same person, and their severity will, in every instance, much depend upon the strength and nature of the acid. The nitric acid produces yellow spots upon the lips and skin.

In the treatment of these cases, the most efficient antidote is calcined magnesia; next to this, soap, and then chalk and water. An ounce of calcined magnesia should be mixed with a pint of water, and a glassful taken every two minutes, so as to prevent vomiting, and prevent the acid from acting. Should this not be at hand, dissolve half an ounce of soap in a pint of water, and give a glassful every few minutes. Or chalk and water in any dose will be found very useful. If neither of these can be directly procured, decoction of linseed, marshmallows, gum arabic, or any other mucilaginous liquor may be taken in the mean time; for the success of the treatment depends entirely upon the activity with which aid is given. Glysters prepared with magnesia, soap, or chalk, should also be given.

The use of emetics, or other means of exciting sickness, as the finger, &c. is not advisable here, but the speedy employment of *Read's Stomach Pump*, with the view to extract its contents, is highly proper in this and every other case of poison taken into the stomach.

The acid being neutralized by the foregoing means, the inflammation caused by its action is next to occupy our attention. To reduce this, the patient should be placed in a warm bath at about 95 degrees, and the region of the stomach and bowels fomented with cloths wrung out of lukewarm water. If relief be not speedily obtained by these measures, fourteen or sixteen

leeches should be applied to the surface of the abdomen, and blood must also be taken from the arm. If there be a difficulty of swallowing, and the inflammation be great, twelve or fifteen leeches should be applied to the neck. The repetition and extent of the blood-letting, both by leeches and the lancet, must be entirely regulated by the severity of the pain, and the urgency of the other symptoms denoting inflammation; for the safety of the patient henceforth depends upon the copious evacuation of blood, and the debility caused thereby is to be considered merely as a slight inconvenience. These energetic measures will be assisted by the administration of a drink made with linseed, mallows, or gum arabic boiled in water. Every sort of food, not excepting broth, is to be forbidden.

Should the convulsive movements continue after the inflammation has subsided, thirty drops of compound spirit of sulphuric ether, twenty drops of laudanum, and three ounces of distilled water, may be mixed together, and a table-spoonful be given every fifteen minutes. The patient must return to his usual solid diet by very slow degrees.

Strong Alkalies. The effects of these are nearly similar to those caused by acids, except that the taste of the alkalies is not sour, but acrid and urinous. The matter vomited does not effervesce when mixed with chalk, but turns the blue colour of violets green.

Vinegar and lemon-juice are the best antidotes to the concentrated volatile alkali, potash, and all other alkaline poisons. A glassful of water, mixed with a table-spoonful of vinegar, or lemon-juice, should be given frequently, and in defect of these, simple water, in such quantities as to cause vomiting. Emetics, and other irritating means, are to be avoided. If this be not sufficient, the treatment by leeches, the lancet, warm bathing, &c. as above recommended, must be followed.

Corrosive Sublimate, Calomel, &c. When large quantities, either of corrosive sublimate, arsenic, copper, or any of the preparations of antimony, tin, silver, &c. are taken, the patient complains, in general, of a constriction in the throat, pain in the back part of the mouth, stomach, and intestines, and a desire to vomit: vomiting follows with more or less violence. The matter vomited is of various colours, often mixed with blood; it does not effervesce when thrown on the ground, or mixed with chalk; it never changes the colour of violets green, and when it reddens the tincture of litmus or red cabbage, it is in a very slight degree. To these alarming symptoms are joined frequent and fetid eructations; hiccup; difficulty of respiration, and almost suffocation; the pulse becomes small, hard,

and accelerated, and, in certain cases, it may be said to vibrate under the finger like catgut.

An inextinguishable thirst, difficulty of making water, cramp, the extremities of an icy coldness, horrible convulsions, general decay of strength, the features of the face changed, and delirium, are the symptoms which announce approaching death, unless energetic measures for relief are speedily put in practice.

The white of egg beat up with cold water, is the best counterpoison to corrosive sublimate, and all other mercurial preparations. In defect of this, milk may be used with great success. The whites of twelve or fifteen fresh eggs should be beat up and mixed with two pints of cold water, and a glassful taken every two or three minutes, so as to favour vomiting. If the number indicated be not at hand, as many as are should be used in the mean time, while others are sought after. The yolks may also be used with some advantage. In defect of eggs altogether, milk, gum-water, decoction of linseed, mallows, barley, or sugared water, should be taken in abundance. If, after taking the number of eggs prescribed, the symptoms be not removed, the same should be repeated: these should be prepared beforehand, so that we may act with the greater promptitude. The patient is then to be treated by bleeding with leeches, and the lancet, &c. as ordered under the head of strong acids, the abstraction of blood being proportioned to the severity of the symptoms denoting inflammation.

Arsenic. Though this article is not unfrequently administered in small doses, for the cure of ague, and other diseases, it should never be forgotten that, even in extremely minute quantities, it is an energetic poison, which is readily absorbed into the circulation, and has a strong tendency to promote disease in the heart.

In cases of poison by arsenic, medical practitioners universally agree, that the first indication is to empty the stomach as quickly as possible. If Mr. Read's syringe invented for this purpose be at hand, it is by far the best contrivance, and serves to empty the stomach more certainly and speedily than any kind of emetics. In case this syringe cannot be procured directly, the patient should drink large quantities of sugar and water, of warm or cold water, of linseed tea, and other mucilaginous fluids; by this means the stomach is filled, and vomiting effected. A drink composed of equal quantities of lime water, and sugar and water, may also be given, and sometimes with great advantage. At the same time, the throat ought to be tickled with a feather or the finger. Some practitioners are in the habit of giving emetics in the present case, while others

refrain from them, on account of their tendency to increase the irritation created by this poison. If ever they are resorted to, blue vitriol, in a dose of ten grains, or sulphate of zinc, in a dose of twenty-five grains, are most proper.

When inflammation of the abdomen, and alarming nervous symptoms prevail, the means of relief are blood-letting, the warm bath, fomentations, emollient clysters, and antispasmodic medicines, as advised under strong acids.

When the poison has been evacuated from the stomach, it should never be forgotten, that the success of the treatment will depend, in a great measure, upon the regimen observed during the patient's convalescence, which is almost always tedious, and he should be chiefly nourished with milk, gruel, rice, and beverages of a softening mucilaginous nature. This advice is applicable to convalescencies after swallowing any mineral poison.

Copper. The white of eggs is the best antidote to all the preparations of copper when taken in poisonous quantities. A person who has swallowed verdigris, blue vitriol, or any salt of copper, is to be treated after the manner directed for corrosive sublimate.

Tartar Emetic. When large and poisonous doses of tartar emetic, or any other antimonial medicine, have been swallowed, should there be severe vomiting with cramp in the stomach, abundant supplies of sugar and water, or simple water, must be administered. If the vomiting continue after the poison may be supposed to have been rejected, and the pain be augmented, give a grain of opium, or thirty drops of laudanum, or of the solution of acetate of morphia, and repeat it at an interval of a quarter of an hour, for two or three times, if the symptoms are not calmed. In cases where the symptoms continue or increase, twelve or fifteen leeches should be applied to the abdomen, and to the throat also, if there be a great difficulty of swallowing.

If the individual who has taken the antimonial preparation does not vomit and yet suffers from the other symptoms, several glasses of sugar and water should be taken; and if, in spite of this, vomiting does not occur, a decoction of gall-nuts, or of Peruvian bark, should be administered directly. Four or five gall-nuts may be boiled for ten minutes in two quarts of water, and then strained; of which a tumblerful should be taken every five or six minutes. If the gall-nuts are not at hand, two ounces of yellow bark may be boiled for the same time in the same quantity of water, and given in the same manner. Emetics ought not to be given. If, notwithstanding the use of these means, the symptoms continue, the proper treatment

will consist in the use of leeches to the region of the stomach, the warm bath, fomentations, &c. as already recommended under the head of strong Acids, at page 202.

Tin. Milk is the best counter-poison to the salts of tin, of which several glassfuls should be given; or, in defect of milk, warm or cold water to excite vomiting; as for the rest, if the symptoms increase, the means of relief are bleeding, fomentations, emollient clysters, and the other means for subduing inflammation recommended at page 202.

Lunar Caustic, or Nitrate of Silver. Common kitchen salt is the most effectual antidote to lunar caustic. A solution of a large spoonful in two pints of water should be made, and several glasses of this salt-water taken directly; vomiting will take place, and the symptoms diminish. If they should continue, the treatment calculated to allay irritation and inflammation, as pointed out at page 203, must be followed.

Poisoning from *bismuth*, and *zinc*, is to be treated in the same manner as that produced by arsenic.

Nitre. When nitre has been swallowed in an excessive dose, the treatment should be the same as that advised for arsenic, except that the lime water must be suppressed. See page 204.

Lead. Sugar of lead, extract of lead, and the other poisonous preparations of this mineral, when taken in a large dose, give rise to a sweet, astringent, metallic taste, constriction of the throat, pain in the stomach, desire to vomit, or vomiting, and that often mixed with blood, fetid eructations, hiccup, difficulty of respiration, and other alarming symptoms.

Glauber's salt, Epsom salt, and hard water, are the best antidotes here. Several glasses of a solution of one of these salts should be given. The proportion may be half an ounce of the salt to a wine quart of water. When we have by this means occasioned vomiting, and expelled or decomposed the poison, and the principal symptoms are relieved, sugar and water, or gum water, may be taken; but should the pain and other indications of inflammation make progress, the treatment by leeching indicated at page 203, must be followed.

OF VEGETABLE POISONS.

The principal vegetable poisons are opium, hemlock, foxglove, thorn-apple, deadly nightshade, henbane, poisonous mushrooms, and prussic acid.

The general effects of these poisons, when introduced into the stomach in a large quantity, are stupor; numbness; heaviness in the head; desire to vomit, slight at first, but afterwards insupportable; a sort of intoxication; pupil of the eye dilated;

furious or lively delirium; sometimes pain; convulsions more or less violent of different parts of the body; palsy of the limbs; pulse variable, but in general strong and full at the commencement of the disease; respiration somewhat accelerated. Quickly the convulsions and dejection increase, and death ensues if relief be not speedily afforded.

Opium, Hemlock, Nightshade, and Henbane. In poisoning from either of these articles, and indeed from any vegetable or mineral substance, the first indication is to evacuate the stomach; and I repeat, that if Mr. Read's syringe, or stomach pump be at hand, it is far the most certain and the best way of accomplishing this evacuation. In defect of it, a scruple of sulphate of zinc, or ten grains of sulphate of copper (blue vitriol), must be given directly in water, and repeated after an interval of a quarter of an hour, if necessary. It should rarely or never be repeated a third time. The success of the emetic will be favoured by irritating the throat with the finger or a feather, and especially by freely sprinkling and dashing cold water over the face, neck, and breast of the patient. The free application of cold water to the surface of the body, under the present circumstances, has often a greater and more immediate effect in rousing the sufferer than any other expedient, and should never be neglected. Much liquid should not be given with the view of hastening the vomiting; as, far from being useful, the malady is thereby aggravated. If it be supposed that the poison has been taken long enough to reach the intestines, the purgative clyster, No. 8, page 97, ought to be administered.

Vinegar and lemon-juice are the best antidotes to these narcotic poisons; but they must not be given till the stomach has been evacuated. After the poison has been altogether ejected, or nearly so, a cup of water strongly acidulated with vinegar or lemon-juice, should be given every five minutes, which may be alternated with a strong cup of coffee; and the limbs be rubbed with a piece of flannel or a flesh brush. The use of the coffee and acidulated water must be continued until the patient is out of danger. The dashing of cold water on the surface of the upper part of the body should likewise be continued till recovery is insured. The powers of the system must also be supported by giving ammonia, brandy, and other cordials. Half a tea-spoonful of the pure water of ammonia mixed with a little water, has sometimes great effect in rousing the sufferer, and may be repeated frequently, according to the degree of stupor present.

When the drowsiness is extreme, and the disease resembles an attack of apoplexy, bleeding from the arm, or jugular vein must be had recourse to.

Foxglove. Here vomiting should be excited by the exhibition of sulphate of zinc, as just advised for poisoning by opium, and after the poison has been evacuated, the vinegar and water recommended under opium should be given. Twenty or thirty drops of laudanum in a glass of brandy and water may also be administered frequently, or a little of the water of ammonia, as above recommended.

Poisonous Mushrooms. The same treatment as advised under opium is proper here.

Prussic Acid. This is the most energetic of all known poisons, and when strong prussic acid is taken it destroys life before any succour whatever can be given. But when a large dose of the diluted acid has given rise to the symptoms detailed above, vomiting must be directly excited by the administration of a scruple of sulphate of zinc, or ten grains of sulphate of copper, as recommended for poisoning from opium. After the evacuation of the stomach, frequent draughts of strong coffee must be taken, and then, at intervals of half an hour, three or four table-spoonfuls of oil of turpentine mixed with the coffee. Brandy, water of ammonia, and other cordials, are also proper, to support the vital powers.

OF ANIMAL POISONS.

The venemous animals whose bite or sting is accompanied by symptoms more or less severe, are the viper, the rattle-snake, the Cobra de Capello, and other serpents found in hot climates. Some kinds of fish also occasionally prove poisonous, when eaten, particularly in tropical climates.

Viper, Rattle-snake, &c. The effects which follow the sting of these animals, are a sharp pain in the wounded part, which quickly spreads to all the members, and even to the interior of the body; great swelling, at first hard and pale, then reddish, livid, appears gangrenous, and gradually augments; fainting, vomiting, and convulsive movements; the stomach is so sensible that it can retain nothing; a frequent, small, concentrated and irregular pulse; difficult respiration; copious cold sweats; disturbed sight; and the intellectual faculties are deranged. When the swelling is much increased, the small vessels no longer suffer the blood to circulate, and the pulse becomes hardly perceptible. When all the symptoms enumerated have acquired a degree of intensity, the patient dies.

The first thing to be done in these cases, if called early, is to place a ligature rather tightly, immediately above the wound. The ligature should not be so narrow as to irritate the skin; nor should it be continued too long a time, as it favours, if long continued, the development of gangrene. But the most direct

and efficient means of counteracting the absorption of the poison is suction, and this is most effectually done by exhausting a cupping glass over the wound. The cupping glass must be applied as soon after the injury as possible, and kept exhausted until all danger is passed. It has been proved lately in France, that the bites of vipers, both on man and inferior animals, were rendered entirely harmless by the application of cupping glasses. Even the juice of the deadly Upas tree of Java, and prussic acid, have been inserted into wounds made in small animals, and the application of the cupping glasses has counteracted any deleterious effects. Dr. Barry, an English physician residing at Paris, has the honour of this valuable discovery.

If the cupping glass be not at hand, a mixture of equal parts of volatile alkali (pure water of ammonia) and oil, should be applied to the wound, and the swelled parts which surround it. When the principal symptoms are diminished, remove this, cover the wound with a rag dipped in sweet oil, and rub the limb from time to time with the same oil mixed with a small quantity of volatile alkali, in the proportion of an ounce of the former to twelve drops of the latter. If the swelling be very considerable, and the pain acute, remove the ligature. Scarifications should not be made.

At the same time, the volatile alkali (water of ammonia) must be given internally, in a dose of ten or twelve drops in a glassful of water, every half hour in the beginning, if necessary, and afterwards every two hours.

If the case be urgent, as in the bite of the Cobra de Capello, or rattle-snake, great dependence may be placed on a free use of the caustic volatile alkali (pure water of ammonia) both internally and externally. It may be applied undiluted to the wound, and twenty or thirty drops taken in water, every quarter of an hour, or as circumstances indicate.

A small glass of Madeira or Sherry wine may also be given; and the patient is to be placed in bed, well covered, and perspiration promoted as much as possible. An emetic of twenty grains of ipecacuanha powder, or of sulphate of zinc, may sometimes be useful. If there be much bilious vomiting or jaundice, and gangrene continues to make progress, the decoction of bark should be given; a large wine-glassful of this decoction may be exhibited every three hours, mixed with twelve drops of volatile alkali. If, on the contrary, the symptoms diminish, and the individual enters into a state of convalescence, no solid food must be allowed during the first few days; but only a small quantity of light, thin broth, with bread and light pudding.

The internal use of arsenic is also sometimes of eminent service in the bites of venomous serpents. If, therefore, the disease be very serious, twenty, thirty, or forty drops of the arsenical solution may be taken in water, or lemon-juice, every half-hour, during four successive hours; the purgative clyster, No. 8, page 97, being administered without delay, and the painful limb, or part, rubbed with a liniment composed of half an ounce of oil of turpentine, half an ounce of volatile alkali, and an ounce and a half of oil.

The guaco plant of America is peculiarly efficacious in counteracting the injurious effects of these poisons. The Indians make great use of it for this purpose, and it is invariably successful. They swallow one or two table-spoonfuls of the juice of this plant, and inoculate themselves with it in five or six wounds, which they make principally in the side of the chest and between the fingers.

Scorpion and Centipede. The sting of the European scorpion is not very dangerous. It occasions serious danger only in those climates, where the heat is excessive; it then produces a red spot, of the size of a man's little finger nail, which gradually increases and becomes very black in the centre. This black spot is where the sting entered. The part swells and is painful, the inflammation is more or less considerable, and to these symptoms succeed alternate chills and fever, numbness, vomiting, hiccup, and great trembling.

The internal treatment should be that directed when speaking of the viper. The caustic volatile alkali will be one of the best internal medicines, and the same article mixed with oil may be applied to the wound; or a poultice of linseed meal; or bread and milk, moistened with twenty drops of the volatile alkali, may be laid over it, and renewed twice or thrice a day.

When the sting of the centipede proves very troublesome, it may be treated in the same way.

The sting of the *Wasp*, *Bee*, *Tarantula*, &c. occasions, in our climate, only a slight degree of pain and swelling. It is sufficient to rub the parts with a mixture of one or two parts of olive oil, and one part of volatile alkali. The same application is of great service in the stinging of the *Musquito*. If the symptoms should, from any cause, run extremely high, it will be advisable to apply the caustic volatile alkali to the wound, and adopt the internal treatment advised for the bite of the viper.

Whenever the sting of the insect has been left, it is advisable to extract it.

Poisonous Fish. Muscles, the dolphin, the congor eel, the king fish, and the yellow-bill sprat, with some other fish, may,

under certain circumstances, occasion symptoms more or less serious, and even death has been known to be the consequence of their ingestion.

If experience proves that the fish we have named are sometimes poisonous, it also demonstrates that they are far from being so at all times, and to all persons. The individual who can eat them with impunity in our climate, and in all seasons, may be greatly incommoded by them in hot climates, and especially during the summer season.

The usual effects of such fish, when they disagree, are acute pain in the stomach and head, nausea, difficulty of breathing, general uneasiness, intolerable itching of every part of the body, a crimson eruption on the skin, fainting fits, sometimes convulsions, with a coppery taste in the mouth, and a burning sensation in the throat.

The yellow-bill-sprat *(clupœa thrysa)*, has caused horrible convulsions, inflammation of the stomach, and death at the end of half an hour.

In the treatment of such cases, the first object should be to evacuate the stomach by the administration of an emetic of twenty grains of sulphate of zinc, or ten grains of sulphate of copper, dissolved in a little water; and should the poison have been some time swallowed, so as to have passed into the bowels, administer the clyster, No. 8, page 97, after the emetic has operated. Immediately after these remedies have taken effect, mix together two drachms of ether, a drachm of laudanum, and four ounces of mint-water, or any fluid at hand, of which the patient should take a table-spoonful every quarter of an hour. Besides which, mix two table-spoonfuls of vinegar or lemon-juice, in half a pint of water, and let this be taken as a common drink. If the symptoms grow alarming, the use of a little strong brandy and water, or good Madeira wine, with a few drops of volatile alkali in each draught, would be proper. If there are violent and continued pains of the stomach, apply twelve leeches to the upper part of the belly.

OF DISLOCATIONS.

When a bone is forced out of its proper situation, so as to impede or destroy its natural functions, it is said to be *luxated*, or *dislocated*.

As this often happens to persons in situations where no medical assistance can be obtained directly, by which means limbs, and even lives, are frequently lost, I shall lay down a few of the most useful principles applicable to these injuries, and endeavour to point out the method of reducing the most common

dislocations, and those which require immediate assistance. Any person of common sense and resolution, who is present when a dislocation happens, may often be of more service to the patient than the most expert surgeon can after swelling and inflammation have come on, or after the bone has been out of its place for several days, or weeks. When swelling and inflammation are present, it is difficult to know the state of the joint, and improper to attempt a reduction; and by waiting till they are gone off, the soft parts, and the bone itself, acquire a certain position, the muscles adapt themselves in length to the altered situation of the bone to which they are attached, and often cannot be lengthened sufficiently for it to be reduced.

The absolute immobility of a limb, or at least the inability of performing certain motions, is amongst the most characteristic symptoms of a dislocation. Sometimes, however, a considerable degree of motion continues for a short time after dislocation.

There are several important differences in dislocations, and the difference is immense, in regard to the danger of the case, arising from the circumstance of a dislocation being attended, or unattended with a wound, communicating internally with the joint, and externally with the air. When there is no wound of this kind, the danger is generally trivial, and the dislocation is termed *a simple one*; when there is such a wound, together with the dislocation, the case is denominated *compound*, and is frequently accompanied with the most imminent peril. Some joints are much more disposed than others to compound dislocations. The accident is rare at the hip, shoulder, and knee, but is very frequent at the ankle, elbow, and wrist.

The following are some of the chief principles relative to the present subject, laid down by the late illustrious Mr. Pott, formerly surgeon to Bartholomew's Hospital; and they merit great attention.

1. Although a joint may have been dislocated by means of considerable violence, it does by no means follow that the same degree of violence is necessary for its reduction.

2. That all the force used in reducing a luxated bone, be it more or less, be it by hands, towels, ligatures, or machines, ought always to be applied to the other extremity of the said bone, and as much as possible to that only.

3. That in the reduction of such joints as are composed of a round head, received into a socket, such as those of the shoulder and hip, the whole body should be kept as steady as possible.

4. That in order to make use of an extending force with all possible advantage, and to excite thereby the least pain and inconvenience, it is necessary that all parts serving to the

motion of the dislocated joint, or in any degree connected with it, be put into such a state as to give the smallest possible degree of resistance.

5. That in the reduction of such joints as consist of a round head, moving in a socket, for example, the shoulder and hip, no attempt ought to be made for replacing the said head, until it has by extension been brought forth from the place where it is, and nearly to a level with the said socket. All that the operator has to do in these instances, is to bring the bone to this level; the muscles attached to it will, for the most part, do the rest for him.

6. That whatever kind or degree of force may be found necessary for the reduction of a luxated joint, such force should be employed gradually; the lesser degree being always first tried, and it being increased little by little.

With respect to the second maxim here laid down, I would remark, that Sir Astley Cooper states, that so far as he has had an opportunity of observing, it is generally best to apply the extension to the bone which is dislocated; but, that dislocations of the shoulder are exceptions, in which he mostly prefers to reduce the head of the bone by placing his heel to the arm-pit, and drawing the arm at the wrist, in a line with the side of the body.

Extension may either be made by means of assistants, who are to take hold of napkins, or sheets, put round the part, at which it is judged proper to make the extension; or else a multiplied pulley may be used. In cases of difficulty, Sir Astley Cooper thinks the pulley should always be preferred.

When the attempts at reduction fail in consequence of the muscular strength of the patient, which counteracts all efforts to replace the bone, or from several days having elapsed since the receipt of the injury, constitutional means should be employed in conjunction with those that are mechanical. The constitutional means here referred to are those which produce a tendency to fainting, such as bleeding, the hot bath at 100 or 103 degrees, and small quantities of emetic tartar to produce nausea, but not vomiting.

All that is necessary after the reduction of a simple dislocation, is to apply to the part cloths dipped in Goulard water, or spirit of wine and water, with a proper bandage, and to keep the limb perfectly easy.

In compound dislocations, the reduction must be effected without delay, and with as little violence and disturbance as possible, and then the wound is to be treated in all respects as any other wound in the same part.

Dislocation of the Lower Jaw.

The lower jaw can only be luxated in one direction, that is, forwards. When both sides are luxated, the mouth is wide open and cannot be shut; and an empty space is felt before the ear. When only one side is dislocated, the mouth is distorted, and turned towards the opposite side, while the fellow teeth of the jaws do not correspond.

These dislocations may be reduced in the following manner: The operator is first to wrap some linen round his thumbs to keep them from being hurt by the patient's teeth, and then introduce them into the mouth, as far as possible along the grinding teeth. At the same time he is to place his fingers under the chin and base of the jaw, and while he depresses the grinding teeth with his thumbs, he raises the chin with his fingers, by which means the condyles become disengaged from their situation; at which instant the muscles draw those parts so rapidly back into the articular cavities again, that the operator's thumbs might sometimes be hurt, did he not immediately move them outward between the cheek and the jaw.

The patient must for some time avoid much speaking, and such food as requires much mastication.

Dislocation of the Neck.

Complete luxations of the first bone of the neck from the second are almost inevitably and immediately fatal. Such a partial dislocation of some of the bones of the neck, however, sometimes occurs, as may be successfully treated. In this case the neck is bent, and the head generally falls forward on the breast.

Here the head should be gradually drawn up, whilst the shoulders are carefully pressed downwards by an assistant, until the bones are brought in their proper place; when the patient, if the injury has not been fatal, gradually recovers his senses.

The head should long be retained in an elevated position by instruments contrived for that purpose.

Dislocation of the Collar-bone.

The collar-bone may be dislocated either at its junction with the fore-part of the shoulder-blade, or with the sternum or breast-bone.

In its junction with the breast-bone, it is rarely dislocated in any other way than forwards, when a hard circumscribed

tumour is felt, or even seen, on the front and upper part of the breast-bone.

In the dislocation of this bone at its junction with the shoulder-blade, the nature of the injury is pointed out by pain at the top of the shoulder; a projection of the end of the collar-bone, under the skin covering the anterior point of the shoulder-blade; and a depression of the shoulder.

When reducing either of these luxations, the arms and shoulders of the patient are to be firmly drawn backwards and outwards, by an assistant, whilst the operator replaces the protruded end of the bone. A linen compress should then be placed on the point of dislocation, and a bandage applied, which is to go over each shoulder and under each arm-pit. The patient's elbow should be kept close to his side, and the arm be supported in a sling.

Dislocation of the Arm.

The humerus, or upper bone of the arm, may be dislocated in three different directions: viz. downwards, into the arm-pit; forwards, under the collar-bone; and backwards, on the shoulder-blade.

In every kind of dislocation of this bone, there is always a manifest depression, under the anterior point of the shoulder: all the motions of the arm are painful, and limited; and the arm cannot move without the shoulder moving also.

In attempting the reduction of this luxation, the following plan of Sir Astley Cooper's should be resorted to, which he states to be the best, and generally successful, in three-fourths of such injuries, when recent. The patient should be placed in the recumbent posture, upon a table or a sofa, and near its edge. The operator then binds a wetted roller round the arm immediately above the elbow, upon which he ties a handkerchief. Then, with one foot resting upon the floor, he separates the patient's elbow from his side, and places the heel of his other foot in the arm-pit. The arm is then steadily drawn with the handkerchiefs for three or four minutes, at the end of which the bone in common cases is easily replaced. If more force be required, a long towel can be used, with which several persons may pull. The above distinguished surgeon generally bends the fore-arm nearly to a right angle with the upper arm *(os humeri)*, because this position relaxes the large muscle *(biceps)* on the fore-part of the arm, and lessens its resistance; in many cases, however, he makes the extension at the wrist, a plan in which he finds more force requisite, but the bandage is less apt to slip.

Dislocation of the Elbow.

The fore-arm consists of two bones, which may be dislocated together backwards or laterally. The radius, or upper bone, may also be alone dislocated forwards, or backwards. The luxation of the fore-arm backwards is by far the most frequent. In this accident, the fore-arm is in a state of half-flexion, and every attempt to extend it produces acute pain; the point of the elbow, called olecranon, projects, and is higher than usual; and the extremity of the humerus cannot be felt in the bend of the elbow.

It may be reduced by the following method: the patient is to sit in a chair, and the operator placing his knee on the inner side of the elbow joint, in the bend of the arm, and taking hold of the patient's wrist, bends the arm. At the same time, he presses on the fore-arm with his knee, so as to separate them from the upper bone of the arm, (the humerus); and whilst the pressure is kept up with the knee, the arm is to be forcibly, but slowly bent, and the reduction is soon effected.

When the bones are dislocated laterally, forcible extension of the fore-arm will in general be sufficient to reduce it.

Dislocation at the Hip.

The head of the thigh-bone may be dislocated in four different directions, viz. upwards and backwards, on the *ilium;* downwards into the *foramen ovale;* forwards on the *pubes;* and backwards on the *ischiatic notch.*

1. Dislocation upwards and backwards.

In this case, the limb is from one inch and a half to two inches and a half shorter than its fellow; the thigh a little bent and carried inwards; the knee inclines more forwards and inwards than the opposite one; the leg and thigh are turned inwards; the foot cannot be turned outwards; and the natural roundness of the hip has disappeared.

In the treatment, the body of the patient must be first fixed by passing a strong belt or roller, &c. round the pelvis or hip, the ends being carried over the hip of the sound side, where they are either to be firmly held by assistants, or confined to some immovable body. A second belt is to encircle the dislocated thigh-bone, immediately above the knee, and with this extension is to be made in the direction of the line made by the limb, when it is brought across the other thigh a little above the knee. As soon as the head of the bone has been brought on a level with the cavity into which it is to be returned, by the assistants who are making the extension, the surgeon is to force it into the cavity by pressing on the large protuberance of the

bone, called trochanter, which every one feels on putting their hand on the side of the hip; or the knee and foot may at this period be gently rotated outwards.

2. Dislocation downwards.

This is next in frequency to the preceding dislocation. Here the injured limb is two inches longer than its fellow; the thigh is flattened; a hard, round tumour, formed by the head of the thigh-bone, is felt at the inner and superior part of the thigh; and the knees are widely separated from each other.

This kind of luxation is very easy of reduction. The pelvis having been fixed as above described, the necessary extension is to be made downwards, and outwards, so as to dislodge the head of the bone. The muscles then generally draw it into its natural cavity, on the extending force being gradually relaxed, if the upper part of the bone be pulled outward, with a bandage, and an assistant at the same instant inclines the ancle inwards. Then the limb is used as a lever, with very considerable power.

3. Dislocation forwards.

The thigh-bone is occasionally dislocated forwards, or upwards and forwards on the pubes, when the whole limb is turned outwards, and cannot be rotated inwards; it is shortened by one inch; the head of the bone forms a tumour high in the groin; and the knee is generally carried backwards.

The treatment of this injury only differs from that just described, in the extension being made in a line behind the axis of the body, so as to draw the thigh-bone backwards, and when such extension has been continued for some time, a napkin is to be put under the upper part of the bone, and its head lifted over the edge of the cavity into which it is to go.

4. Dislocation backwards.

In this case, the head of the thigh-bone is placed behind its natural cavity, and a little above its middle; the limb is generally not more than half an inch shorter than its fellow; the knee and foot are turned inwards, but not nearly in so great a degree as in the first kind of dislocation; the thigh inclines a little forward; the knee is slightly bent; and the limb is so fixed, that flexion and rotation are in a great measure prevented.

The pelvis being fixed, the extension is to be made downwards and forwards, across the middle of the other thigh, so as to dislodge the head of the bone, while the operator, with a napkin placed under the upper part of the thigh, just below the trochanter minor, pulls the upper part of the thigh-bone towards its proper cavity. In this case, pulleys are preferable for making the extension.

In *dislocations at the knee*, the situation of the displaced bone is obvious to the sight, and extension is to be made upwards by

the thigh-bone, and downwards by the fore-leg, while the bones are replaced by pressure with the hand.

Compound dislocations of the knee generally demand immediate amputation.

OF FRACTURES, OR BROKEN BONES.

This subject is in many points an important one, but in a work like the present, little can be said respecting it, on account of the restricted size of the volume, and the more pressing nature of other matter; I shall, therefore, simply state those facts respecting the nature and treatment of fractures, which, from being of the greatest importance, will be the most useful to such persons as are desirous of assisting in the reduction and cure of a broken limb, when a skilful surgeon is not at hand.

Fractures are divided into *simple* and *compound*. By a simple fracture, surgeons mean a breach in the continuity of a bone, without any external wound. By a compound fracture, they signify the division of a bone, where there is a corresponding wound in the soft parts, by which the fractured extremity of the bone becomes exposed. Of course, the danger attending a compound fracture is unmeasuraly greater than that of a simple one.

In the treatment of broken bones, the whole business of the operator consists in putting the displaced extremities of the bone into their natural situation again;—in keeping them in this situation by means of a suitable apparatus;—in endeavouring to avert unfavourable symptoms, and in adopting measures for their removal when they have actually occurred. The consolidation of a broken bone is, strictly speaking, the work of nature, and is effected by a process, to which a state of perfect health (humanly speaking) is above all things propitious.

The means employed for the reduction of fractures in general, are chiefly three, viz. extension; counter-extension; and setting. Extension signifies the act of pulling the broken part in a direction from the trunk, with a view of bringing the ends of the fracture into their natural situation. By counter-extension is implied the act of making extension in the opposite direction, in order to hinder the limb, or even the whole body, from being drawn along by the extending powers, which would then be unavailing. In all cases where the broken ends of the bone are displaced, as soon as the necessary extension has been made, the operator is to endeavour to place the broken ends of the bone in their natural situation, which is termed setting. One of the first principles to be attended to in the reduction of fractures, is to put the limb in such a position as will relax the most powerful muscles connected with the broken bone; because

these muscles principally impede the reduction, and disturb the ends of the fracture. The limb is, therefore, either to be bent or straightened, or turned a little to either side, as the nature of the case may point out.

After the bones have been put into their natural situation, time alone would complete their cure, were there not in the muscles a continual propensity to displace the ends of the fracture again. Hence the necessity of employing means for fixing the broken limb so effectually, that it may continue perfectly motionless during the whole time requisite for the union of the fracture. This indication is sometimes troublesome and difficult. The means employed for its fulfilment are, an advantageous position; quietude; bandages; splints, &c. Whenever the case is a fracture of the lower limbs, the patient should lie strictly in bed, until the union is complete; and the bed should be narrow, and consist of a horse-hair mattress, or some other article that will not sink. A half-bent position of the limbs is the most natural and easy, and consequently the best for fractures (excepting the broken thigh); and care must be taken that the broken limb is placed so that it may bear throughout its whole length, equally and perpendicularly upon the surface on which it lies, and not be only partially supported. It would appear, that the best pillows for the support of broken limbs, are those stuffed with chaff of oats; and in whatever position the limb is placed, it must be kept perfectly quiet.

A piece of soap plaster is the best application to the seat of injury in simple fractures, and over this an eighteen-tailed bandage may be applied rather loosely. This is a bandage consisting of several narrow strips of linen, long enough to encircle the limb, which are stitched to a long piece of linen running lengthways; and will, therefore, permit the limb to be examined without being moved. All tight bandages do harm.

But splints are the most efficient of all the applications made to a broken limb, with a view of keeping the ends of the fracture steady, and in a proper state of contact. They are usually made of wood, or strong pasteboard. In using them the object should be to preserve steadiness in the whole limb, without compressing the fracture at all. In the case of a broken leg, two splints only should be employed; they must reach above the knee, and below the ankle, and be so guarded with tow, rag, or cotton, as to press only on the joints. In the case of a fractured thigh-bone, the limb is now generally laid in a straight posture, when one splint should reach from the hip to the outer ankle, and another (somewhat shorter) from the groin to the inner ankle.

After having reduced the fracture, and applied a suitable apparatus for maintaining the reduction, means must be employed to prevent and remove any unfavourable symptoms. It is proper, therefore, in most cases, to allow for the first few days only very low diet, as broths, tea, and bread. When the patient is young, and strong, and the swelling and inflammation are likely to be considerable, bleeding from the arm to the extent of ten or twelve ounces should be practised. In other circumstances, it may in general be dispensed with. The patient may be permitted to drink as often, and as much as he likes, of any cooling acid beverage, as lemonade, &c. A very low diet is only to be continued for the first few days, unless great inflammation arise; for experience proves that the method when too much prolonged, has bad effects. Costiveness is to be averted by the use of the clyster, No. 8, page 97, or the mild aperient, No. 27, page 103. When the bowels are relieved, a bed-pan should be carefully introduced under the patient, and a disturbance of the limb avoided as much as possible. The fracture-bed, invented by Mr. Earle, of London, is of much value in the present instances, as it enables the patient to void his fæces, without the slightest change of position.

It is, generally speaking, a good plan for the first few days, to wet the bandages with cold water; for in this way, the tendency to inflammation and swelling may be considerably lessened.

Compound fractures are to be treated much in the same way as simple fractures, except that the wound will require a treatment similar to what is proper for other wounds in the same part. If the wound is but slightly lacerated, its edges should be gently drawn together with a few short strips of adhesive plaster, after the fracture has been set. This will give it a chance of uniting without suppuration. But when the wound is so bruised and lacerated, as to leave no room for the hope of its uniting without the formation and discharge of matter, a small piece of soft lint should be placed lightly between its edges, and over this a pledget of lint spread with the ointment, No. 94, page 118, or some other mild digestive. In order to allay irritation and inflammation in the part, linen cloths, wet with the cooling lotion, No. 68, page 113, may be applied over them; or should great swelling and tension take possession of the limb, a warm bread and water poultice may be substituted. Should high inflammation, attended with pain, irritation, and fever, supervene, it will be necessary to bleed the patient, to
he bowels open, and administer the fever mixture, No.
e 115, with or without the solution of acetate of morphia,

or laudanum, as the severity of the pain points out. After the matter has been formed and let out, and the pain and fever subside, the lowering plan of treatment must be dropped, and the patient be supported with food of a light and nourishing quality, a little of the decoction of bark being given twice or thrice a day, and the relaxing poultice, changed for some mild strengthening lotion or ointment, as No. 72, page 113, or No. 95, page 119.

OF SUBSTANCES LODGED IN THE GULLET, OR IN THE WINDPIPE.

The gullet is the tube which conveys the food from the mouth into the stomach. Foreign bodies frequently lodge in it, and by pressing on the windpipe, and thus impeding respiration, or by exciting great irritation in the gullet itself, are often attended with bad, and even fatal symptoms. Hence an immediate attempt must always be made to extract them. For this purpose, the fingers may be employed, and if they will not reach far enough, a pair of long curved forceps should be used. A bunch of thread with a multitude of nooses, fastened upon the end of a probang, or piece of whalebone, is well calculated for catching hold of small substances, like fish-bones, needles, &c. If this resource fail, a piece of dry sponge may be fixed on the extremity of a probang, or piece of whalebone, and passed into the stomach, and when expanded with moisture and withdrawn, will sometimes bring up articles, which, on its introduction, it had passed in its dry and diminished state. When the stomach is full, the excitement to vomiting has sometimes answered; but if the foreign body be sharp and pointed, it is rarely advisable.

When the substances are not of a sharp, or otherwise very hurtful kind, and cannot be extracted, they must be pushed down into the stomach with a large bougie, or a long whalebone probang, having a piece of fine sponge securely fastened to the end. But such practice is rarely advisable, when the foreign bodies have a sharp pointed form, like nails, pins, needles, &c. When surgeons have not ventured, or not been able, to force such substances down into the stomach, they have often made their way, after a time, to the surface of the body, where an abscess has been formed, out of which they have been discharged.

When the substances lodged in the gullet, can neither be extracted, nor pushed down into the stomach, if the breathing be not dangerously obstructed, and liquids can yet be swallowed, the wisest plan is to avoid irritating the passage with

the further use of instruments, and leave the case to nature, that is to say, as far as manual interference is concerned; for bleeding and the administration of mucilaginous oily draughts, may be often useful. But should the foreign body dangerously obstruct the breathing, and the substance itself cannot be felt externally, the patient would perish, if some means of facilitating the breathing were not immediately adopted; and, under these circumstances, the most prudent plan would be to make an opening into the windpipe. This operation is neither difficult nor dangerous, and it is to be feared, that not a few persons have lost their lives under such circumstances, from its not having been performed. In those cases where the size of the foreign body is so large, as to indicate its situation by any hardness, or prominence in the neck, it might be more proper to make an incision in the gullet itself, for the purpose of its extraction.

The great art of passing any instrument down the gullet, for surgical purposes, consists in putting its extremity at once directly against the back part of the mouth, and, in passing it down, keeping it closely against the part it touches. The knowledge of this circumstance is extremely useful in passing probangs and bougies, &c.

It should be remarked, that after a sharp, hard substance has been either ejected, or propelled into the stomach by nature, or art, the same painful sensations in the throat frequently continue a certain time afterwards, which were experienced while the foreign body was actually lodged in the passage. These sensations, however, are only owing to the manner in which the gullet has been irritated, and, consequently, would be seriously aggravated by the further unnecessary introduction of instruments.

But pebbles, beans, or other small substances, may fall into the windpipe, as well as stick in the gullet, and this is far the worse accident of the two. The symptoms usually resulting from such a body getting into the windpipe, are immediate difficulty of breathing, severe convulsive cough, and a painful sensation in some part of the passage. In some cases, the violent cough produces convulsions in the limbs, and the difficulty of breathing is also attended with a rattling in the throat. Sometimes a perfect calm, at intervals, will follow the afflicting cough, during which time the patient will sit up, and appear cheerful and comparatively easy; which seems to arise from the foreign body's getting into a less sensible part of the canal. But this calm is deceitful, and should not allow us to delay having recourse to an operation, which is the only thing that can permanently and effectually relieve the patient, in the pre-

sent case. An incision must be carefully made, by a skilful surgeon, first through the skin and muscles on the anterior part of the neck, and then through the rings of the windpipe, an opening being thereby made into some part of this canal, of such a size as to allow the offending body to pass out, which it then usually will by the simple efforts of the patient in coughing. Many children who have let pebbles, or beans, fall into the windpipe, have been rescued from certain death by this operation; while others, in the same circumstances, on whom it has not been performed, have fallen victims to the ignorance and inattention of the medical attendant, or to the groundless fears of the parents. An *early* recourse should be had to the operation, for though the patient may live for several days with a foreign body in the windpipe; yet it must not be forgotten, that its presence there necessarily excites inflammation, and if the operation be too long delayed, the patient will often die of convulsions if very young, or of a consumption if older, at no long time after the extraction of the foreign substance. The most skilful surgeon should be obtained for the performance of this operation.

OF THE

MANAGEMENT

OF

INFANTS AND YOUNG CHILDREN.

1. *Of Dentition, or Teething.*

The time of teething is a most important period of the infant state, and subjects it to manifold complaints and dangers, more especially in the present sedentary mode of rearing children.

This period usually commences between the fifth and tenth months, and the process of the first teething commonly continues to the sixteenth at the least, and sometimes much longer. It almost invariably begins with the incisores, or front teeth of the lower jaw. Usually two of those are cut, and then the corresponding ones in the upper jaw. After two teeth in each jaw have appeared, it is, in some instances, a considerable time before the contiguous ones come out; but now and then six or eight are cut in hasty succession. The incisores are succeeded by the four molares, or grinders; then the canine, and the last of all of an infant's first teeth, their antagonists, or the eye-teeth; making in all sixteen. This is the ordinary number of children's first teeth, though it is sometimes exceeded.

In children who are strong and healthy, this process goes on pretty much as above described, and the teeth are cut both easily and soon; but in unhealthy and weakly infants, the process is slow and uncertain. Accordingly, children sometimes cut their teeth irregularly, or cross, as it is called, both by the teeth appearing first in the upper jaw, and also at a distance, instead of being contiguous to each other: this is accounted an indication of difficult, or painful dentition. The ease or difficulty of teething may likewise be guessed at, by the circumstances under which the two first teeth shall happen to be cut; the succeeding ones frequently working their way in a corresponding manner.

Dentition is commonly preceded and accompanied with various symptoms: the child drivels; the gums swell, spread,

and become hot; there is often a circumscribed redness in the cheeks, and eruptions on the skin, especially on the face and scalp; a looseness; gripings; stools, green, or pale, or otherwise discoloured; watchings, startings in the sleep, and spasms of particular parts; a diminution, or increased secretion of the urine, which is often of an unnatural colour; now and then a discharge of matter, with pain in making water; in almost all cases the child shrieks often, and thrusts its fingers into its mouth. Less common symptoms are a swelling of the tops of the feet and hands; the tumifying of one or more of the glands of the neck; and cough, difficult breathing, and fits.

Hippocrates, the father of physic, has correctly remarked, "that infants cut their teeth more readily in winter than in summer; that such as are rather inclined to be lean cut them more easily than those that are very fat; and children who are loose in the belly most safely of all."

In the *treatment* of difficult teething, the last remark of Hippocrates is worthy of especial attention, *the successful management of the process mainly depending on preserving a free state of the bowels.* This must never be lost sight of; and it is surprising how great and perfect a change will often be wrought in the case of fever, convulsions, and other alarming symptoms arising from teething, by procuring an open belly, and improving the secretions by the use of minute doses of calomel and jalap. Whenever, therefore, the teething of a child is difficult, or painful, give immediately a little rhubarb and magnesia, or a little calomel and jalap or rhubarb, and afterwards a little castor-oil daily, (as it would not be advisable to continue the calomel and rhubarb constantly,) so that the bowels may be freely moved every day; to which add great attention to diet, which should be very simple, smaller in quantity than usual, and of the most digestible nature, with plenty of pure air, and exercise. If the fever be considerable, saline medicines, as in No. 24, page 102, will be of much service; and in case the symptoms are alarming, a little discharge should be obtained and kept up from behind the ears, by rubbing the parts with Spanish flies, or putting on a small blister. In all severe cases, the gums should be freely lanced, down to the top of the rising teeth. Some persons object to the lancing of the gums, but the general opinion among the best informed of the profession is, that when much fever, or other constitutional affection, is present, together with swollen and inflamed gums, that imprisoned tooth should be set at liberty.

If a child, during painful dentition, is at the breast, the nurse's diet and bowels must be particularly attended to. Her diet should be very mild and diluting, and small in quantity.

When a looseness comes on during this process, it must on no account be hastily checked. Unless it be excessive, it ought not to be interfered with; and even when excessive, it must not be stopped, but only moderated by the use of some simple thing, as three or four grains of the compound powder of chalk in a table-spoonful of dill water.

2. *Of Food and Feeding.*

Ever keep in mind, that it is generally right to be sparing in the quantity of food; for over feeding, as well as feeding improperly, are highly injurious.

A child in health will require only breast milk for the first four months, unless there is not a sufficiently early provision made by the breast of the mother for this purpose; then the child must have something given it, as near in composition as possible to the mother's milk, and we can scarcely recommend any thing better than a mixture of cow's milk, water, and loaf sugar, in the proportion of two-thirds milk, one-third water, and a very small quantity of loaf sugar. For the first month nothing but this should be given, and very little, if any thing, else for the second month; afterwards, it may stand in need of a small cup of beef tea and crumb of bread daily. At the end of four months, it should be fed twice a day, once with bread and milk, or biscuit powder and milk, and once with light broth and bread, arrow-root, or rice. At eight or nine months, it should be fed three times in twenty-four hours; and then more solid food should likewise be given daily, as a bread or rice pudding, or a boiled egg. For an infant taken early from the breast, the diet should principally consist of cow's milk warmed, and poured on bread, first soaked in water, and of light broth with bread. If the child has a purging, the milk should be boiled.

After the first year, animal food in substance may be given twice a week to children. To those four or five years old, animal food may be allowed daily, and bread and milk, night and morning. Particular care is, however, necessary, not to give nutriment in large quantities to children who take but little exercise, or to those who are weakly, for in such, an excess, or even a great variety of food, is apt to produce worms, convulsions, rickets, slow fever, scrophula, and purging.

The generation of acid in the stomach and bowels is a common cause of disease in children. If a child at the breast be repeatedly attacked with the gripes, and falls away, the diet ought to be changed from milk to one consisting of broths, beef tea, and light puddings; and to aid in preventing a return of the gripes, the child should be exercised well in the open

air. In this case, it will be proper also for the mother to live chiefly upon animal food. If this should not be effectual, apply for medical assistance. In general, the use of spice in children's food is to be reprobated; and, in illness, the diet of all children should be as light as possible. In fever, drinks containing nourishment, such as barley-water, toast and water, thin tapioca, and rice-water, will be proper, taken cold in summer, and warm in winter. In obstinate purgings, children must have rice, arrow-root, and also hartshorn shavings boiled in beef tea, or beef tea thickened with baked flour, or sago and thick milk; and much good has been derived from putting a flannel roller round the body, when the purging resists these means.

3. *Of Dress and Dressing.*

It should be particularly noticed, that over clothing, or clothing improperly, makes a child tender, and subject to cold. A child requires fewer clothes than an adult: a short shift, and a flannel waistcoat tied behind, with a short petticoat sewed to it, and a short gown, rather stouter in winter than in summer, is all the body dress a child requires; more clothes only make it tender, chilly, and subject to colds, unless it is weakly, and then a flannel shirt is sometimes useful. Until an infant reaches the seventh or eighth month, it is best without stockings; neither can its petticoats be too short. The whole of the dress of children, whatever may be their age, should be perfectly loose and easy, so as to allow of free motion to the limbs. It is highly beneficial to expose the legs, arms, and breasts of healthy children to the open air.

4. *Of Exercise and Sleep.*

Generally speaking, it is a good rule never to prevent a child from attempting to walk, however young it may be. When a child seeks to put its feet on the ground, let it do so, but do not force it to walk. This effort at exercise is both pleasant and serviceable to a child; it is proper to encourage it in this, and, as it grows up, regularly to exercise, but to avoid fatiguing it. Amuse and employ a child, but never suffer it to be still when it is right for it to be in motion and actively employed. In exercising any child, however, avoid fatiguing it, and particularly a sickly one; a weakly child ought not to be allowed to stand or walk long together; therefore it should be alternately carried in the arms, drawn in a vehicle, and invited to walk. The practice of placing children on the damp ground, after fatiguing them with long walks, cannot be too much reprobated.

Until the third year, most children require an hour's sleep in the middle of the day, after which they should be invariably exercised till they begin to be tired, and may be put to rest at seven o'clock. In summer let them rise at six, and in the winter at seven.

5. *Of Air.*

It is indispensably requisite for children to bear, without inconvenience, the vicissitudes of the atmosphere. A free and continued exposure to the open air is of the utmost consequence to children's health; the sooner infants are taken into it the faster they will thrive; in the open air they grow up strong, less subject to colds, disordered bowels, convulsions, and rickets; complaints so frequent among those children who are reared in nurseries. Not only the face, but the legs, thighs, and arms, should be freely exposed to the air. Even in confined streets, in the populous districts of the metropolis, it is of infinite service to keep the children out of doors; and the poor should set open the bed room windows and doors of their habitations. Those children who have been properly exposed to the air from birth, may be safely exercised in it, if healthy, at all seasons.

Of Cold Bathing.

Frequent bathing is conducive to cleanliness, it imparts vigour to the muscles and nerves, and promotes alacrity and cheerfulness of mind. In a striking manner does the cold bath preserve and promote the health of the infant race. It is proper to begin the practice of dipping in warm weather, and to continue it through every season after. The cold bath is not only a serviceable application to children in health, but to those that are sickly also, especially the rickety; it may be resorted to thrice a week. A sudden dip, twice repeated each time of using the bath, will be sufficient. The more delicate and weakly require the chill to be taken off the water the first three or four times of going into it. If the shock of a cold bath appears too powerful for the constitution, partial bathing with salt water, or sponging the body with it, may be substituted, and is often highly useful. Sea bathing is preferred for those having the king's evil.

Immediately after bathing, let the child be wrapped in a blanket and well dried, and if it be disposed to sleep, allow it to do so; if not, it may be dressed, and suffered to run about. Weakly children using the cold bath may wear a

flannel shirt. Excoriations are effectually obviated by frequently washing the parts of the body subject to them with cold water.

What I have further to say respecting the management of infants and young children, will be best compressed into short rules, which it is highly advisable that every nurse should attend to.

Rules for the Mother, and for the General Management of the Child, during the First Month.

1. Let her not permit herself to be persuaded from having her child put to the breast, so soon as she herself may be able to bear the fatigue.
2. Let her not delegate to another the sacred duty of nursing her own child, unless the reasons for so doing are insurmountable.
3. She must most scrupulously attend to the dressing and undressing, or even performing this herself, when her health and strength will permit this delightful task.
4. She should never, under any pretext of convenience, permit her child to be fed, so long as she can supply it with sufficient nourishment herself; and to secure to herself this important point, she should pay a scrupulous regard to her diet, and her exercise in the open air.
5. The dressing of the child should early engage the attention of the mother; it should always be made subservient to comfort instead of show.
6. This should consist in part of flannel; especially during cold, or even cool weather.
7. The dressings of the child should be changed as often as they become soiled, when this luxury can be indulged in.
8. Though it may be found that flannel is the most eligible substance as a general rule, there are cases in which it may be improper; and these should be carefully distinguished.
9. The belly band is one of the most important parts of the child's dress; it should *always* be made of flannel, and should be always cut *bias*.
10. The greatest care should be taken to apply it properly; and too tight an application should be particularly avoided.
11. If this bandage be applied too tight, it may produce the evil it is intended to prevent.
12. The child should be carefully protected against all unnecessary wet; and when it is discovered to be in this situation, it should be changed as quickly as possible.
13. In dressing the child as few pins should be employed

as possible; three are all that are necessary, if the clothes be properly arranged.

14. As a general rule, the child should never be fed at this period of its life; there may be exceptions, however, that may render this necessary.

15. When an exception to this rule exists, the food of the child should consist of milk, water, and sugar; as advised at p. 226.

16. If the child be fed, it should have but small quantities at a time, and never crammed to surfeit.

17. The woman should exercise in the open air, as soon as this is rendered safe, by the state of her health, the period after confinement, and the state of the weather.

18. She should never subject herself to *partial* exposures, under the hopes of hardening herself.

19. The re-application of a diaper, after it has been dried simply, should be prohibited; as several evils arise from the practice.

20. The mother may indulge in such diet as her experience has proved to be innocent—for it will seldom or never disagree with the child, when it perfectly suits the mother.

21. When the mother experiences any inconvenience from the use of any substance or substances, she should not hesitate a moment to abandon them; for if they disagree with her, they will be sure to do so with the child.

22. Should there be a failure in the quantity of milk, the mother must not attempt to increase it by highly seasoned food and stimulating drinks.

23. She may, however, use, and sometimes with great advantage the ordinary nutritious substances.

Rules adapted to the Infant State.

1. Use a child early to the boat or spoon—in case of illness, or of a failure of milk from the breast of the mother.

2. Keep an infant dry and warm—to preserve health, promote growth, and obviate chafing.

3. Feed an infant in an upright posture—to give uniform distention to the stomach, and thus to obviate indigestion and gripes.

4. In the act of suckling, it is proper to take a child frequently from the breast for a minute or two—to obviate too rapid a distention of the stomach, which occasions puking or acidities.

5. Expose an infant early in the air—to strengthen and enable it to withstand colds, and to obviate purging.

6. Attend invariably to cleanliness in an infant—to prevent diseases of the skin, slow fever, rickets, and decline.

7. Let an infant's dress be loose and easy, and free from pins—to avert accidents, glandular obstructions, and impediments to growth.

8. Place an infant, when asleep, on the right side—to favour the descent of the food into the bowels, and to obviate indigestion.

9. Attend strictly to plaintive cries—by this means you may trace the first causes of illness; for a child will never cry, if well and at ease.

10. Wash a *strong* child in cold water, and dip it thrice a week—wash a *weak* one in warm water—to refresh, promote healthy perspiration, and prevent diseases of the skin.

11. Encourage a child to stretch and thrust out its limbs, and to crawl about—to teach it active habits early, to strengthen it, and promote the circulation.

12. Rub a young child night and morning, all over with the hand—this exercises it, and promotes the circulation of the blood.

13. Comb a child's head, and wash it frequently with soap and water—to prevent scald head, and painful eruptions behind the ears, and on the neck.

14. If a child has cut four teeth, if it is in good health, and its bowels are regular, wean it at nine months, without any previous preparation—do this to obviate numerous inconveniences both to the mother and child.

15. If a child has been lately weaned, and is attacked with hooping-cough, or any other severe disease, it may require the breast again—it will be thus supplied with the diluting nutriment, which it would then stand in need of; or, should a weaned child, to which is offered suitable food, fall off in its health, decline and pine away, it may be prudent to procure for it a good breast of milk, and to let the child suck again—to obviate an exhausting fever, which will inevitably prove fatal.

N.B. This rule, however, must not be invariably adopted; and ought always first to have the sanction of an able professional man.

16. An infant should have three or four stools daily, of a bright orange colour—a deviation from this appearance denotes acidities and indigestion, requiring the prompt exhibition of a little rhubarb and magnesia, with or without a small quantity of the sulphate of potash. See the prescription, No. 121, page 125.

Rules adapted to Childhood.

17. If a young child takes but little exercise, give it but little solid food, increasing it in proportion to the exercise taken—to obviate thirst, fever, head-ache, and glandular obstructions.

18. Should a child's breath smell, it is commonly a symptom of a disordered stomach, or of worms. Should its belly grow large, its complexion become pale, and flesh soft, disease has already commenced. In either of these cases the child will require a good free air, and not only domestic but medical management. The prescription, No. 121, will be useful.

19. *In a fit*—untie the clothes, raise the head, wipe away all froth from the mouth, and keep it open, pressing down the tongue, and drawing it forward at the same time. Let the child be first quickly exposed to cool fresh air, and its face sprinkled with cold water; then gently rub, with a warm hand, the belly, back, and limbs; apply a succession of warm flannels to them, or resort to a warm bath, and put warm tiles under the arm-pits; strike the soles of the feet smartly with a piece of flat wood, tickle the nostrils, and inside of the ear, with a feather or toothpick. To an infant give five drops of harts-horn in a little water; to a child two years old, ten drops in a little water.

N.B. Remember, though no signs of life appear, it is necessary for two hours to act up to these directions. Do not suffer the head to hang back, nor to lean forward upon the chest.

Cautions adapted to Infancy and Childhood.

1. Never let an infant sleep alone at night in cold weather —for fear of suspending the breath, and the circulation of the blood.

2. Never let an infant sleep the whole night on the mother's arm—for fear of suffocation.

3. Never wake an infant out of a sound sleep by rough means—for fear of producing fits, or a purging.

4. Avoid the use of tight bandages, especially round the body—for fear of producing fits, obstruction of the bowels, or decline.

5. Avoid giving Godfrey's Cordial, Daffy's Elixir, or any other warm anodyne—for fear of producing fits, fever, or palsy, a common consequence of quack medicines, indiscreetly given.

N.B. Dalby's Carminative is a safer medicine than either of the foregoing, but is objectionable from its containing laudanum, and a great deal of essential oil. In general, it is far inferior, as a remedy, to syrup of rhubarb mixed with a little calcined magnesia.

6. Avoid giving any quack medicine—for fear of bringing on decline, or sudden death.

7. Avoid feeding infants in the night—for fear of bringing on the gripes, and even worse complaints, from over distention of the stomach.

I know a lady of rank who was so fond of feeding her infants, that she would have them taken up for this purpose, several times in the night. The consequence was that she lost all her children at the age of from twelve months to two years.

8. Avoid warm nurseries and close air—for fear of making a child delicate, weakly, and susceptible of cold.

9. Avoid carrying a child always on the same arm—for fear of making it crooked.

10. Never confine a child's limbs by wrapping its clothes tight round it, especially at night—by inaction of the muscles, and retention of moisture, the child will become weak and sickly.

11. Avoid exposing an infant to the open air, in a cold season, when its bowels are disordered, or if it has shortness of breathing, with fever and cough—for fear of bringing on high inflammation.

12. Never allow a child's food to be chewed—it is not only a nasty practice, but if the nurse has a sore mouth or gums, she may communicate disease.

13. Never provoke violent laughter, nor disregard violent crying—for fear of a fit in either case.

14. Never wash a child with milk, with a view to heal a chafed part—milk will inflame, and cold water will heal it.

N.B. The proper management of females in pregnancy, and immediately before and after confinement, will be found in the author's *Treatise on the Diseases of Females.*

OF THE

CHARACTER, SYMPTOMS, CAUSES, DISTINCTION, AND TREATMENT OF DISEASES.

PART II.

OF AGUE, OR INTERMITTENT FEVER.

Ague, or intermittent fever, is a fever, consisting of paroxysms, or periods of fever, between each of which there is a distinct and perfect intermission from febrile symptoms. There are several kinds or species of ague, but the *quotidian*, which returns every day; the *tertian*, which returns every other day; and the *quartan*, occurring on the first and fourth day, are the principal. It is likewise termed *autumnal* ague, when it happens in autumn, and *vernal*, when in spring.

Every fit of ague consists of three stages:—a *cold*, a *hot*, and a *sweating* stage. In the cold stage, the face and limbs become pale, the features shrink, the sensibility is greatly impaired, the breathing short and anxious, and a sensation of a severe cold is felt over the whole body, succeeded by shivering and violent shaking. Afterwards the heat of the body returns, and soon becomes dry, burning, and much above the natural standard; the countenance is now flushed and tumid; there is often acute pain of the head, sometimes slight delirium; the pulse is strong, full, and frequent, and the thirst urgent. These symptoms are followed, first, by moisture of the skin, and then by an universal and equable perspiration, which terminates the fit. The whole paroxysm generally occupies about eight hours.

In the intermission, the countenance is apt to be pale and shrunk, and the constitution in general to be affected with languor and feebleness. In the commencement of agues, however, the patient is sometimes free from indisposition.

Spring agues are, in general, less severe and obstinate, and

less liable to be followed by dangerous consequences, than the autumnal; they are also less liable to return. Quartan agues, which generally commence in autumn, often do not cease till spring. If quotidian agues lengthen their period, and change into tertian, it is a good sign; but the mutation of a disease of a long interval into a shorter one, denotes the increasing severity of the malady. Thus a quartan ague is not dangerous, but if it be converted into a quotidian, it is then very dangerous.

The chief predisposing *cause* is debility, however induced; but the grand exciting cause is *marsh miasma*, or the effluvia arising from stagnant water, or marshy ground, impregnated with vegetable matter in a state of putrefactive decomposition. Dampness, and the night air, are particularly favourable to the full operation of marsh miasma. Ague does arise, however, from other causes than marsh effluvia: and it may be produced by sympathy, or irritation in the stomach and intestines.

TREATMENT. On the commencement of the actual fit, the patient should be placed in bed between the blankets, and partake freely of warm diluting, but not stimulating drinks, as water-gruel, barley-water, &c.; and laudanum may be given in a little cinnamon or simple water. Laudanum is useful here probably on account of its stimulant properties, and therefore a large dose should be given, not less than from forty to sixty drops. I think the best time to give it is an hour before the fit is expected, but it is often likewise useful after the commencement of the hot fit.*

One scruple of the subcarbonate of ammonia, with eight grains of the compound powder of ipecacuan, and an ounce and a half of mint-water, form a draught of much service in moderating the attack, when given on the invasion of the cold fit.

In the intermissions, the principal indications of treatment, are to cleanse and strengthen the stomach and bowels, and to invigorate the general habit. The Peruvian bark is well known to be, in general, the most valuable medicine in the cure of ague; but previous to its exhibition, the stomach must be cleansed by the use of an emetic, consisting of twenty grains of ipecacuan powder, and after that has ceased to operate, the bowels should be evacuated by giving one of the pills, No. 97, page 119, washing it down with a full dose of the purging

* "The mode of giving it, (laudanum) just at the commencement of the cold stage, shortens this stage very much, and renders the whole paroxysm milder; facts of which patients are so conscious, that our soldiers in the Peninsular hospitals regularly applied for an ague-draught (sixty drops of laudanum and a drachm of ether, in water) when they saw their nails turning blue, which is generally the first sign of the commencement of a paroxysm."—*Cyclopædia of Pract. Medicine, vol.* 1, *p.* 226.

mixture, No. 73, page 114. The sooner the bark is commenced after these operations the better. It is most efficacious in the form of powder, and in large doses, administered at short intervals. An ounce of the best bark may be divided into eight doses, and a dose taken every hour, or every second hour. When the interval between the fits is short, it must be administered immediately after the paroxysm, and continued till the return of the next; on the other hand, when the intermission is long, its exhibition should be delayed till within six or eight hours of the time at which the cold fit is expected. It must invariably be continued for some days after the attacks disappear.

If great debility prevail, the bark must be combined with wine and aromatics; each dose may be taken in a large wineglassful of old Port, with a scruple of aromatic powder. If it occasion purging, add three or four drops of laudanum to every dose; if costiveness, mix the dose with a scruple or two of powdered rhubarb occasionally. When nausea and oppression attend its use, twenty or thirty drops of the diluted vitriolic acid is an excellent addition to each draught.

In very obstinate agues, the bark will sometimes be more efficacious if mixed with strong brandy and water, or combined with snake root. See page 75.

But there is a preparation of Peruvian bark, not long since introduced, called the sulphate of quinine, which is still more valuable than the bark itself, inasmuch as it operates more quickly, with greater certainty, and in a smaller compass, than the latter. It is equal to the removal of the most inveterate cases, and will sometimes cure this disease after the bark in substance has failed. Two, three, or four grains of the sulphate of quinine, made into a pill with a small quantity of extract of gentian, may be taken in the same way as the powdered bark; and after the disease is removed, one of these pills should be continued twice a day, for a week or two, to prevent a relapse. This medicine is particularly useful in the ague of children, as it may be administered to them almost without their tasting it, and when they could not be prevailed upon to swallow the bark in any other form. It is an article which enjoys the confidence of the whole medical profession.

Should the pulse be hard and strong, and other inflammatory symptoms be present, as pain in the side, &c. this state must be reduced before giving the bark, by a low diet, and particularly by taking away eight or ten ounces of blood from the arm; since pounds of bark have been given, under such circumstances, without effect, when the disease has yielded readily after the loss of a little blood.

The two foregoing remedies, are, in general, by far the best for intermittents of every kind; where they fail, arsenic or cobweb are the best substitutes. In Lincolnshire, and other counties where this fever is very prevalent, arsenic is much employed, and with great success; but it is a remedy of so active a nature, as to be fit to be taken only under the care of a medical practitioner, and then it ought never to be employed till other and less deleterious medicines have failed. Four drops of the arsenical solution, gradually increased, if necessary, to six or eight drops, twice or thrice a day, will speedily cure the most obstinate agues. It is seldom advisable, or requisite, to continue its use beyond ten days, or a fortnight.—See *Arsenic.*

Cob-web is an old and popular remedy for the present fever, and it is as efficacious as popular. Some writers speak of it as a mere dirty object of vulgar superstition, but they are much mistaken, for ten grains of cob-web given twice or thrice before the expected time of each paroxysm, and continued in this way for three or four days, or longer, as circumstances indicate, will be found a powerful mean of putting an immediate and permanent stop to the recurrence of the ague. The patient should, however, be prepared for its use by the previous employment of an emetic and purgative, as prescribed before beginning the bark. The only valuable cob-web is that produced by the black spider, which inhabits cellars, barns, and stables. It is sometimes very effectual in arresting the progress of the febrile symptoms in every other kind of fever. Dr. Jackson, a physician of acknowledged accuracy, and great experience in the treatment of fevers, observes, that it is more abrupt and efficient in its operation than bark or arsenic, or any other remedy employed for the purpose, with which he is acquainted.—*Dr. Jackson on Fever*, *p.* 241.

One of the reviewers (a physician) of the first edition of this work, although he was pleased to speak very favourably of it, expressed strong doubts of the utility of cob-web, and wished it to be expunged from the book, but I have too solid a foundation for the opinion given respecting it above, ever to change my sentiments on the subject. Indeed, so highly do I think of it, that I cannot refrain from inserting here an extract from Dr. Jackson's observations on its value, and mode of administration, in the various species of remittent fever, and in typhus. Dr. Jackson was for fifty years in the medical department of the army, and during that period treated or superintended fevers of every kind and every grade, at home and abroad, equally under the burning sun of the West Indies, and on some of the most swampy plains of Europe. He was well

known to the profession, as one of the most attentive and accurate observers, as well as one of the most judicious and successful practitioners, and I shall now transcribe his sentiments on the present point, and leave the public to judge, whether or not I am correct in proposing cob-web as a valuable remedy in fever.

"I think I may venture to say, (observes this experienced physician,) that the cob-web prevents the recurrence of febrile paroxysms more abruptly, and more effectually than bark, or arsenic, or any other remedy employed for that purpose with which I am acquainted. The cob-web was rarely given before the subject was prepared by bleeding, emetics, or purgatives; and given to a subject so prepared, it seldom failed to effect a cure comparatively permanent: relapse or conversion into another form of disease, being, upon the whole, a rare occurrence where the disease had been suspended by this remedy. If it was not given until the paroxysm was advanced in progress, the symptoms of irritation, viz. tremors, startings, spasms and delirium, if such existed as forms of febrile action, were usually reduced in violence, sometimes entirely removed. In this case, sleep, calm and refreshing, usually followed the sudden and perfect removal of pain and irritation. Vomiting, spasms, and twisting in the bowels, were also usually allayed by it: there was no effect from it where the vomiting or pain was connected with real inflammation, or progress to disorganization. In cases of febrile depression, deficient animation, and indifference to surrounding objects, the exhibition of eight or ten grains of cob-web was often followed by exhilaration; the eye sparkled; the countenance assumed a temporary animation; and, though the course of the disease might not be changed, or the dangers averted, more respite was obtained from a pill of cob-web than what arises from, or belongs to, the action of wine, opium, or any thing else within my knowledge."

When this disease proves unusually obstinate, a somewhat different plan may be pursued. In the case of a quartan, in St. Thomas's Hospital, which had lasted two years, Dr. Fordyce prescribed ten grains of the compound powder of ipecacuan, with a scruple of carbonate of ammonia (which may be taken in any aqueous vehicle), two hours before the paroxysm was expected. It succeeded perfectly. A profuse perspiration followed the use of this draught, and entirely prevented the cold fit; bark was next freely given, and this obstinate ague was cured in a few days.

Fifteen grains of salt of tartar, with a scruple of chamomile flowers, in powder, and an ounce and a half of mint water, form a draught that has often been found of superior advantage in particular cases of ague which had resisted the employment of the bark. It may be given every fifth or sixth hour during the intermission.

When an ague is accompanied with a sallowness of the complexion, and pain, tenderness, or swelling about the region of

the stomach or liver, indicating the existence of some internal obstruction or disease, the alterative pill, No. 98, page 119, should be taken every night for some time, in order to its removal. In very swampy situations, especially in hot climates, obstructions and disease of the bowels, liver, or spleen, are very apt to arise in protracted intermittents; when the bark will often disagree, and it will be necessary to substitute some other bitter for it, as gentian, quassia, chamomile, or snake-root In such cases the compound powder of ipecacuanha will be found very serviceable, as an adjunct to the bitters.—Five grains may be taken every night or oftener.

With respect to diet, if, in the commencement, the pulse is hard and strong, and the face flushed, these inflammatory symptoms will require a spare mild diet; but debility generally prevails, and then it ought to be as full and generous as the stomach will easily bear, observing to take that food which affords the most nourishment with the least irritation, as mutton or lamb chops, chicken, eggs, bread, and good wine.

All agues are very liable to return from the operation of slight causes; the patient will, therefore, find it necessary to avoid exposure to marsh miasma, and all other sources of debility. If he lives in a part of the country where swamps and fens are numerous, he should take a dose of the sulphate of quinine twice a day, for three or four weeks, occasionally, particularly in the spring and autumn, and carefully avoid exposure to the night air.

OF APOPLEXY.

Apoplexy, or an apoplectic fit, is a sudden suspension of the powers of sense and motion, from some diseased affection of the brain, or nervous system, the respiration being generally laborious, and frequently attended with a stertorous noise. It is strictly a disease of the nervous system.

We are sometimes warned of the approach of apoplexy by a dull pain in the head, accompanied by a sense of heaviness; giddiness; drowsiness; frequent fits of night-mare; fulness and redness of the face and eyes; obscurity of sight; bleeding from the nose; faltering in the speech; ringing in the ears, and loss of memory: but its attack is more frequently sudden, and the patient falls to the ground with scarcely any warning, and lies as if in a deep sleep, from which he cannot be roused.

In this state, his breathing is laborious, and generally accompanied by stertor, the face is red and puffed, the veins of the head and neck are distended, the head is hot, and often in a copious perspiration, the eyes are prominent, blood-shot,

sometimes half open, but more frequently quite closed, the pupils dilated, and a frothy saliva is often excreted from the mouth. The pulse is at first regular, strong, full, and slow, but soon becomes weaker, frequent, irregular, and intermitting. The pupils of the eye are commonly dilated, but they are now and then much contracted.

The duration of a fit of apoplexy is various; but it generally lasts from eight to twenty-four hours, and occasionally to thirty-six hours, or still longer.

There are two varieties of apoplexy, which are in general clearly marked, the one attended with a hard, full pulse, flushed countenance, and stertorous breathing; the other with a feeble pulse, and pale countenance. The former usually occurs in persons of a full plethoric habit, and considerable energy and strength; the latter, for the most part, in the old, phlegmatic, and feeble.

Generally speaking, the latter form of the disease is the most dangerous, since, from the general failure of the energies of life, nature has less ability to assist us in the use of our remedial measures. In any other point of view, the degree of danger will be generally measured by the violence of the symptoms. In general, the shorter the fit the more favourable the prognosis.

It is very doubtful, whether the sudden deaths we so frequently hear of, ought to be ascribed, as is common, to apoplectic seizure, since genuine apoplexy very seldom destroys life in less than two hours. They appear to depend rather upon some violent affection of the heart, or stomach, or upon the rupture of some blood-vessel larger than those of the brain.

The most common immediate *cause* of apoplexy is pressure on the brain, either from an effusion of blood or serum, or from a distention of the vessels of the brain, by an accumulation of blood in them, independently of effusion.

Whatever operates in determining a great quantity of blood to the head, or in impeding a free return from it, may produce excessive distention or effusion within the cranium, and be, therefore, reckoned as exciting causes: such are violent passions of the mind, immoderate exercise, intense study, fits of intemperance, excessive straining, ligatures about the neck, the suppression of accustomed evacuations, as piles, &c. unrestrained indulgence of the appetite, and exposure to sudden and great heat, or to excessive cold.

This disease may happen at any age, but is most frequent about the middle, or in the decline of life, especially in persons of a plethoric habit, who have short necks, and who are indolent, and indulge much in eating and drinking.

Apoplexy is *distinguished* from epilepsy, or falling fits, by the presence of convulsions and contortions of the limbs in the latter, by the comparative shortness of the fit, and the greater facility with which the patient is roused.

In deep intoxication, the breath is in general tainted with the intoxicating liquor, and the patient may be in some degree roused by shouting in his ear, and by applying a strong stimulant to the nostrils.

Treatment. Although, in systems of physic, it has been usual to divide this disease into the two varieties of *sanguineous* and *serous;* the former arising from the effusion of blood, the latter from the extravasation of serum; yet it is very doubtful whether these distinctions have any real foundation in experience, or observation. But, in treating this disease, it is unquestionably proper and necessary to attend to the following modifications, namely:

1. *Apoplexy occurring in the vigorous and plethoric.*

2. *Apoplexy attacking a constitution infirm by nature, or enfeebled by age, intemperance, or excessive exertion.*

1. In the former case, blood-letting, both general and local, active purgatives by the mouth and in clysters, and the free application of cold to the head, form the best remedies; but in the apoplexy of the infirm, or enfeebled, we must be cautious and sparing in the employment of the lancet, and all other very active depletive measures.

In all cases of the disease, the patient should, if possible, be immediately carried into a spacious apartment, into which cool air may be freely admitted; his head and shoulders should be placed in an elevated position; all ligatures, especially those about the neck, must be speedily removed, and the legs and feet should be placed in warm water, or rubbed with the stimulating embrocation, No. 45, page 106.

When the disease occurs in a full habit, or has been preceded by marks of strong action in the blood-vessels, a pint or two of blood should be immediately drawn from the arm, or jugular vein, and a dozen leeches may be applied to the temples, or the patient may be cupped on the back of the neck. Immediately subsequent to these operations, a copious purgative clyster, as No. 8, page 97, quickened by the addition of four ounces of infusion of senna, should be exhibited, which may be followed by active purgatives, administered by the mouth as soon as the patient is able to swallow. The powder, No. 120, page 125, washed down with a full dose of the mixture, No. 73, will be proper. The head may, at the same time, be covered with linen rags, wet with cold water, vinegar and water, or pounded ice. Should the patient not be able to swallow the

ordinary purgatives, ten grains of calomel and two of powdered gamboge, mixed with a little jelly or sweet butter, may be placed on the root of the tongue.

Unless the first clyster operates well, it ought to be quickly repeated, which may likewise be observed with regard to the purgative powder. In the commencement, the purgative medicine should be repeated every day, and afterwards every second or third day, for some time.

A mustard poultice, as No. 4, applied to the feet, is a proper measure in the beginning, and sometimes a useful one. Some practitioners recommend blisters, but they are of doubtful advantage.

An emetic is seldom advisable or safe, unless the fit has come on soon after a hearty meal, when it ought to be the first thing resorted to.

Dr. Baillie, after recommending the treatment above laid down, says, "if the patient should recover by these means, the best plan of management, in order to escape from another attack, is to live almost entirely throughout future life upon vegetable food, and to abstain from wine, spirits, and malt liquor. It will be of considerable advantage to avoid any strong, or long-continued exertion of the mind. In a few instances, when the full state of the vessels of the brain had for some time subsided, I have derived considerable advantage from the moderate use of tonic medicines, and more especially of steel."—*Baillie's Posthumous Writings, p.* 168.

2. But in the second variety of apoplexy, which is the disease of an enfeebled constitution, local bleeding by cupping and leeches, will be preferable to that of the lancet. Purgatives are here sometimes of much service. The forms above recommended are proper, though the patient need not take them in so large doses as are advisable in the apoplexy of full habits. Blisters may also be applied, first to the back, and then to the arms or thighs; and when the patient is recovering, a change of air and scene, with the use of mild tonics, as No. 33, or 35, the bowels being carefully regulated by gentle aperients, may be resorted to with the prospect of considerable advantage. Much of the treatment recommended for *Indigestion* will be useful here.

There are many cases of apoplexy continually occurring in which, at the time of seizure, there are present symptoms of deficient vital energy of the brain and constitution, although considerable corpulence may exist, or general appearances of strength; thus *in the commencement of the attack, and before reaction has supervened*, the countenance may be pallid or sunk, the pulse of the arteries of the neck weak or small, the tempe-

rature of the head not greatly increased,—and in such cases we must not bleed until reaction has followed, but administer gentle stimuli, as sal volatile and water internally, apply the volatile salts to the nose, and dash cold water freely over the head and face. After the patient has recovered a little, the face becomes flushed, and the arteries of the neck manifest an increased action, we may then order blood-letting with great safety and advantage. A useful case illustrative of this practice is found in *Dr. Copland's Dict. of Medicine, p.* 103. He says,—

"Travelling in the summer, in one of the short stages, I sat opposite an aged and corpulent man, who, very soon after our leaving town, suddenly lost his consciousness and power of motion. His countenance became first pale, then bloated and inexpressive, his breathing slow and slightly stertorous, all his muscles completely relaxed, and he fell in a few seconds, upon those sitting around him. We were only a few doors from a chemist's shop; the coach was stopped, and he was carried thither. He was now profoundly apoplectic; a copious perspiration flowed from his face and forehead, the veins of which were distended, and all his senses were completely abolished. There was no sign of hemiplegia,—but there was general and complete loss of motion and sensation. His neck-cloth having been removed, the pulsation of the carotids was found to be slow and of natural strength and fulness. Whilst he was held in a sitting posture in a chair, cold water was poured gently over his head from a sponge, and his head frequently sponged with it, volatile salts also were held for a short time, and at intervals, to his nostrils. The power of deglutition was at this time abolished, so that it was impossible to administer a draught, chiefly consisting of a small quantity of spiritus ammoniæ aromaticus and camphor mixture, which was prescribed. In a very few minutes his consciousness returned, he took the draught, and, in a short time afterwards, he walked to a coach, in which I accompanied him home. He now complained only of a very slight confusion of ideas, with scarcely any headache, but his carotids beat more firmly. One full blood-letting and an active purgative, were now directed. The next day he was perfectly well, and has continued so. What would have been the result if he had been largely blooded previously to the reaction?"

After recovery, the diet may be a little more generous than what would be proper in the convalescence of a plethoric subject from an attack of this disease. The tonic pill, No. 102, page 121, may be advantageously alternated with the strengthening draughts above noticed. It is a common practice also to recommend the external use of stimulants, as No. 45, or 46, which may be freely rubbed down the spine, over the arms, and on other parts of the body alternately.

Those who, from their constitutional make, are disposed to the present malady, ought to be very attentive in observing a mild spare diet, and regular habits; they should rise and retire early, take very little strong drink, especially avoiding malt

liquors, keep an open state of the bowels, and use a great deal of active exercise in the country. A seton in the nape of the neck, or between the shoulders, is often a valuable preventive, and highly merits the attention of those who have had one attack of apoplexy.

In recovering from an attack of apoplexy, strict attention to diet and regimen is of the utmost moment, and I shall, therefore, conclude this article with some of the most important rules relating to these points. It has been correctly remarked, that the recovery of health and strength after the disorder has been in a measure subdued, requires (and often for a long period of time) unceasing attention to minutiæ.

1. Having the head shaved frequently, or at least washing it daily with cold water, are practices worthy of much regard. Frequently rubbing the head with a flesh-brush, dipped in cold water, is very beneficial. The scurf on the skin is thus got rid of, a proper perspiration promoted, and the head can be kept much cooler.

2. As soon as it is practicable, it is highly expedient to use the shower bath, with cold or tepid water, at least occasionally, as the means of propelling the blood from the head.

3. A strong flesh-brush ought to be applied for ten minutes, night and morning, to the feet and arms, with the view of giving tone to the skin and muscles, and augmenting the *quantum* of daily exercise. Rubbing the limbs, and patting them by the hands of a servant, in particular the feet and legs, with the stockings on, greatly tends to the acquisition of strength, and brings, what is so much wanted, the blood to the extremities. If the speech be affected, a very likely means of obtaining relief is by the application of a hard flesh-brush to the throat, as often in the day as may be convenient; and rubbing under the chin with the fingers. See what is said of *friction* at page 180.

4. The breathing of pure air is of the utmost importance to health; and for that purpose, the improved mode of ventilation, by pulling down the upper sashes, and having a wooden conductor, by which the air is made to strike against the ceiling, cannot be too strongly recommended. By this means, the room occupied by the patient may be kept constantly cool in the summer, and in the winter an occasional recourse to it will prevent any stagnation of air in the apartment, and carry off superfluous heat.

5. The clothes should be kept loose, (especially about the neck, the wrists, and the knees,) and light, for the sake of easy conveyance. It is not difficult, by using Shetland stockings, &c. to combine warmth with lightness.

6. In regard to diet, at breakfast a moderate quantity of milk may be taken, if it agrees with the patient, with hard baker's biscuit, or rusks, or stale, or toasted bread, which are both more agreeable to the stomach, and excite its digestive powers better, than common bread. If costive, toasted brown bread, especially with a little rye flower in its composition, will be preferable. Barley-meal porridge, or gruel, might also be occasionally taken; or tea for a change. No butter or cheese on any account.

Luncheons ought to be entirely given up. For dinner, (about two o'clock,) take a single plateful of light soup or broth, and then a moderate quantity of pudding, made of pearl-barley, or rice. Pearl or pot-barley affords excellent nourishment. When ground into meal, it may be made into scones or cakes (prepared with milk,) which are wholesomer than fermented bread. A little fowl or mutton, or white sea-fish, in particular whitings and fresh herrings, is allowable once or twice a week for a change. The wholesomest fruits, as strawberries, gooseberries, grapes, currants, apples, and oranges, may be taken, but never after the stomach is filled. Stone fruits are to be avoided, excepting perhaps peaches. Remember to eat slowly, and to masticate well what is eaten.

For drink, whey, (more especially clarified, as the French "*petit lait*,") gum water, or toast and water, carefully made, are to be preferred. Ginger, or spruce beer, or soda water, likewise may be taken; but no wine, nor spirits, even with water. Spirits, in particular, are rank poison here. A very little mild *home-brewed* malt liquor may be tried.

A late *tea* may be taken to prevent the necessity of supper, which ought to be given up, or indulged in very sparingly.

7. With respect to sleeping, a mattress is to be preferred; the head should be raised, and very lightly and thinly covered; the pillow to be stuffed with horse-hair instead of feathers. A habit of retiring to bed early, and rising very early, ought to be studiously cultivated.

8. Daily exercise is of the first importance, more particularly if the patient be of a full habit. *Without*, walking much on level ground, surveying the beauties of Nature, and directing the operations, but not joining in the labours of gardening, are practices highly advisable. The management of a greenhouse, and attention to the culture of plants, are excellent means of occupation. These should be alternated with gentle horse exercise. In regard to "*in-door amusements*," neither billiards nor cards are to be recommended, from the anxiety they occasion, independent of other considerations. Books of

an amusing and religious nature are proper, and the company of the cheerful, serious, and well informed, ought to be cultivated. Daily friction and percussion must not be forgotten.

Religious exercises ought not, by any means, to be omitted. The infallible pen of inspiration assures us, that "*Godliness is profitable for all things*;" it means that it is *pre-eminently* profitable, and these exercises will afford consolation and hope, when every other means of relief are sought for in vain.

9. Quit large towns and cities for the open elevated country.

On the whole, it is hardly possible, where the constitution is not gone, or the frame in a state of decay, that a careful attention to all these particulars, will not be productive of the most essential benefit.

OF ASTHMA.

This disease consists in a difficulty of breathing, for the most part temporary, and occurring at uncertain periods, accompanied with a wheezing sound, and a sense of constriction in the chest, with cough and expectoration. At first view it seems to be a disease of the lungs, and these organs are, no doubt, often primarily and chiefly affected; but it is as certain, that in some instances there is no positive disease of the pulmonary organs, the difficulty of breathing, and other symptoms present, denoting deep-seated mischief in the lungs, arising secondarily and sympathetically from severe disorder in other important parts, as in the heart, and especially in the stomach and bowels. The late Dr. Heberden alluded to this in saying, "It is observable in pulmonary consumption, where the whole lungs are diseased, and where a great part of them has been destroyed, that patients have indeed a shortness of breath upon motion, but not any of the violent fits of suffocation which belong to asthma; while in examining the lungs of asthmatic persons after death, there has sometimes appeared no hurt obvious to the senses which could account for the difficulty with which they had performed their office."—*Commentaries, page* 67. Asthma is a disease of the latter period of life, and is very difficult of cure.

The real nature of the difficulty of breathing, called *asthma*, is now much better known than it was even a few years ago. It is evident that there are three distinct and principal causes or sources of this disease, viz. 1. *Dry cough;* 2. *Organic disease of the heart, or large blood vessels;* 3. *Disorder of the nervous influence simply.*

1. By *dry cough* is meant an habitual thickening or congestion in some part or other of the mucous membrane of the lungs.

It is particularly remarkable in the smaller branches of the bronchia, or air passages, and it is reasonable to suppose that if this swelling and thickening takes place beyond a certain degree and extent, it will obstruct the passage of the air, more or less completely, and thus give rise to asthma.

2. Organic disease of the heart, or large blood vessels, gives rise to asthma, by causing an extension of disease to the lungs, and by occasioning an irregularity in the transmission of blood through them.

3. In some instances of asthma there exists, as Dr. Heberden remarks, in the above extract, no sign whatever of vascular congestion, or thickening, or of any other organic lesion; and then we can attribute it only to disorder of the nervous influence simply.*

It is commonly divided into two species, the dry, spasmodic, or nervous asthma; and the humid, or habitual asthma. In the former, the fit is sudden, violent, and of short duration; the constriction on the chest very hard and spasmodic; the cough slight, and the expectoration scanty, and only appearing towards the close of the fit. In the second species, or habitual asthma, the paroxysm is gradual and protracted; the constriction of the chest is heavy and laborious; the cough severe, and more or less constant; the expectoration commencing early, soon becoming copious, and affording great relief. The spasmodic asthma is comparatively a rare disease, not one case occurring for, perhaps, fifty cases of habitual asthma.

Asthmatic paroxysms are usually preceded by languor, flatulency, head-ache, drowsiness, pale urine, disturbed rest, and pain in the head. Soon a sense of tightness and stricture is felt across the breast, with distressing straitness of the lungs, impeding respiration; the difficulty of breathing continues to

* That my readers may clearly understand what is meant here by disorder of the nervous influence simply, I would add, that many persons of a susceptible constitution cannot sustain a lively emotion, whether from physical or moral causes, without being immediately seized with a difficulty of breathing, and in some it is intense. This is the chief or only form which a *nervous attack* assumes in many women—the circulation being frequently not at all affected. Again, the difficulty of breathing which is so easily produced by the slightest exercise in very fat subjects, is also in great part nervous, and may be chiefly attributed to the great expenditure of nervous influence required to move a mass so disproportioned to the ordinary powers of motion.

In examples of impeded respiration, whatever was its cause, we have frequently seen its violence lessened by the patient merely shutting his eyes. We see the same thing in many other pains in different parts of the body, and particularly in pains of the stomach and intestines, (it may be so intense as to simulate those of inflammation,) which the patients could remove or induce at pleasure, by merely opening or closing the eyes, or by turning them to or from a bright light. In such cases it seems probable, that the effects can only depend on the stimulation communicated to or subtracted from the brain by the light; and, consequently, that disorder of the nervous influence simply, without any organic lesion, may give rise to difficulty of breathing, as well as other nervous affections.

increase; both inspiration and expiration are performed slowly, and with a wheezing noise; the speech becomes difficult and uneasy; a propensity to coughing succeeds, followed by the most anxious difficulty of breathing; the patient is threatened with immediate suffocation, and is obliged instantly to rise from an horizontal position. The face is sometimes turgid, and of a livid hue; at others it is morbidly pale and shrunk. These symptoms continue for a longer or shorter period, when they gradually decline, the fit being generally terminated by an expectoration of mucus. Notwithstanding the violence of the assault, it is very seldom that asthma proves fatal at the time.

In spasmodic asthma, the patient frequently soon recovers from the fit, if we except the effects of weakness left behind, and when the weather is warm and favourable, may continue for weeks or months free from difficulty of breathing or cough; but in the humid habitual asthma, although weeks may be sometimes passed without a severe fit, yet the sufferer, for the most part, labours under continual difficulty of breathing, accompanied with a wheezing noise, and more or less cough.

The exciting *causes* are numerous, and among the chief of them we may reckon, hereditary predisposition,—cold and moist atmosphere,—sudden changes of temperature,—removal from a healthy spot in the country to a crowded and populous city,—suppression of long accustomed evacuations,—mechanical constriction of the chest. Yet all these may be resolved into an irritation of some kind or other, existing within the cavity of the chest, and stimulating its moving powers to a convulsive constriction; or, to speak with still more precision, in all cases the exciting cause is an irritant of some kind or other, acting on the too sensible membrane of the bronchia. In such instances, the asthma is a primary affection originating in the chest; but we have already remarked, that this disease not unfrequently occurs secondarily, and as a mere symptom or result of some other complaint, or of a diseased state of some remote organ, as the stomach, bowels, or liver, when it is only to be removed by removing the disorder on which it is dependent. Hence, it is of the utmost importance that we should trace out the actual cause, so as to determine whether it has its seat within the chest, or in a more remote part.

The asthmatic attack itself, as above remarked, seems to be the immediate consequence of a spasmodic affection of the minute bronchia, that is, the minute terminations of the windpipe. These terminations, though minute, are possessed of a set of completely circular muscular fibres, and it is very conceivable that the spasmodic contraction of these fibres may be

carried so far, as to obstruct the air-passages to such a degree as to prevent the transmission of air to a great portion of the lungs.

When once asthma is established, a recurrence of the fit may be readily excited by any excess or imprudence in diet, or any unusual exertions of body or mind. The occasional causes of attacks of asthma are almost always of a kind to give occasion to an immediate and evident disturbance of the nervous influence. Whatever greatly deranges the functions of the stomach and bowels, will prove a powerful cause of exciting the fits; and though this disease is not, generally speaking, immediately dangerous, frequent returns of it are liable gradually to induce incurable disease of the heart, or lungs, and thus to occasion a fatal termination. These facts evince the importance of an unceasing attention in avoiding the constitutional or occasional causes of this affection.

Treatment. I shall consider first, the treatment proper during the paroxysm or fit; and then that which is suited to the intervals. The former is, of course, only palliative, and adopted with the view to shorten the duration of the asthmatic fit, and render it less severe and painful during its continuance; while the latter is sometimes curative, and the object in resorting to it, should be to lessen or remove the diseased condition of the lungs, or other parts on which the malady depends, and thus to free the patient altogether from a subsequent repetition of the attacks, or to weaken their force, and lengthen the intervals between them.

When the fit is on, or felt to be coming on, the patient should be brought near a large fire, and the feet and legs be immediately immersed in warm water; he should drink frequently of some mild diluting liquor made warm, as barley-water, or very thin gruel, into a pint of which, two or three tea-spoonfuls of ether, or of aromatic spirit of ammonia, may be put; and if there be much pain about the chest, the part may be fomented with hot flannels, or bladders of hot water. A draught, consisting of ten drops of Battley's solution of opium, or of laudanum, with half a drachm of ether, and an ounce and a half of mint water, will sometimes be very useful; or Battley's solution may be given in a breakfast-cupful of strong coffee; to be repeated three or four times in twenty-four hours, if necessary. I think very highly of the following pills, two of which may be taken every hour, either with or without the draught.

Take of true James's Powder, ten grains; ipecacuanha powder, four grains; camphor, six grains; extract of henbane, a sufficient quantity to form the mass, which is to be divided into six pills.

Sir John Floyer and Sir John Pringle, both of whom were able physicians, confidently recommended coffee, and the latter eminent practitioner says, that it is the best abater of the periodic asthma that he had seen. The best Mocha is to be preferred, which should be newly burnt, and made very strong immediately after grinding it.

Most patients are aware of the approach of a fit of asthma, by certain premonitory signs, and whenever these signs present themselves, the immersion of the feet in warm water, drinking of warm slops, with the use of a mild aperient draught, should *immediately* be resorted to, as the fit will thereby be frequently prevented.

An emetic of twenty grains of ipecacuanha powder, is often attended with peculiar advantage on the accession of the fit, and may be beneficially employed afterwards, once in three or four weeks. The emetic determines to the surface of the body, promotes spitting, greatly relieves the chest, and is a measure much approved by the generality of the most experienced physicians; but if the patient is averse to it, he may take instead three grains of compound ipecacuanha powder, make into a pill with conserve of roses, every second or third hour till the fit abates.

The inhalation of ether will sometimes give relief during the paroxysm. It can be tried by heating a common tea-pot with boiling water, and after pouring the water quite off, put a tea-spoonful, or two, of ether into the pot, shut the lid down close, and let the patient inhale the fumes by putting the spout into his mouth, and breathing in that way for several minutes. This may be repeated frequently if it agrees, and the severity of the disease makes it desirable; or, the vapour may be inhaled from a pint of boiling water, poured upon half an ounce of camphor, or of balsam of tolu. This should be put into an inhaler.

If the bowels are confined on the accession of the fit, they should be relieved by the exhibition of a laxative clyster, as No. 8, page 97, or by administering a dose of the aperient mixture, No. 73, page 114; but purging is almost invariably to be avoided.

I have known strong brandy and water afford more relief than any other thing during the fit. Dr. Dawson, of Bishopwearmouth, writes in favour of gin and water; indeed, he states, that sufferers from the dry spasmodic asthma have, under his own observation, derived a cure from gin and water, when all medicines, and every other kind of spirits, had completely failed.—*Dawson's Practice of Physic, page* 331.

Dr. Bree, the able author of an approved work on disordered

respiration, advises the following draught to be taken every three hours, during the paroxysm. "Many patients," says he, "who had taken the most powerful antispasmodics, have assured me that none had been so useful; and two gentlemen, now under my direction, inform me, that it is the only medicine that has ever given them relief in the fits."

Take of extract of henbane, three grains; diluted nitric acid, thirty drops; tincture of squill, fifteen drops; water, an ounce and a half:—Mix.

Asthma is frequently observed in *middle-aged* and *elderly* persons, to take much of the character of a slow inflammation and obstruction in the lungs, being attended with a good deal of pain in the chest, feverishness, and hard pulse, especially in the winter and spring, and then, says Dr. Bree, seneka is the most certainly useful medicine that I have tried. In such cases, while the feverishness continues, it must be united with a saline medicine, as three drachms of the solution of acetate of ammonia, to an ounce and a half of decoction of seneka, which may be taken as a draught, three or four times a day. When the febrile state gives way, it should be combined with squill, &c. which will be found to promote spitting, perspiration, and urine, in a powerful manner.

Take of decoction of seneka, an ounce and a half, or two ounces; vinegar of squill, half a drachm; paregoric elixir, half a drachm. —Mix for a draught, to be taken three or four times a day.

This combination will often be useful in the intervals, and the dose of the squill may be increased if necessary.

Dr. Copland says, *(Dict. of Practical Medicine, p.* 148,*)* "The distilled laurel water, or the prussic acid, particularly the latter, is often productive of much benefit in the paroxysm. I have found it of great advantage, when given in from two to four drops at the accession of the paroxysm, and in small doses in the intervals, particularly when the disease is attended with much irritability of the stomach and flatulence. It may be conjoined with camphor, ipecacuanha, &c."

It is a too common practice among some persons to bleed the patient during a severe asthmatic fit, but unless there be great fulness of habit, with a tendency to inflammation, it should never be resorted to; for it greatly augments the subsequent weakness, without mitigating even the present severity of the disease.

During the intervals of the fits, the most valuable medicines are ammoniac, assafœtida, squill, seneka, ipecacuanha, prepa-

rations of zinc or steel, mercurial alteratives, and the *lobelia inflata*, combined with such a diet and regimen as are calculated to invigorate the digestive functions, the organs within the chest, and the constitution at large. In some cases, where no inflammatory symptoms are present, the following pills are very serviceable.

Take of gum ammoniac, gum assafœtida, of each, a drachm; powder of ipecacuanha, fifteen grains; Peruvian balsam, a sufficient quantity to form the whole into a mass, to be divided into thirty pills. Two or three to be taken twice or thrice a day.

Or these:

Take of the compound squill pill, a drachm; powder of ipecacuanha, twelve grains; purified Turkey opium, three grains; camphor, a scruple.—Mix them, and divide into twenty pills. Take two pills three times a day.

When the patient is fully recovered from the fit, either of the stomachic medicines, No. 102, 103, or 104, page 121, will frequently be found eminently useful. Some persons will derive most advantage from the pills No. 102, and others from the No. 104. Those patients who are soon heated by tonics, and those in whom they readily excite head-ache, will derive the greatest advantage from the pills, No. 106. The pills, No. 106, have more of a tonic property than No. 104, and will be more suitable than steel to such persons as have just been described, on account of their not being so heating.

The compound tincture of benjamin, when good, is sometimes a useful medicine, and may be taken to the extent of thirty or forty drops, three times a day, on a lump of sugar.

I have already adverted to the value of occasional emetics of ipecacuanha powder, in the intervals. They are almost invariably useful, especially in habitual asthma, and may be advantageously repeated once a month, whatever other medicine is taken. Fifteen or twenty grains of ipecacuanha powder is a proper dose. Ipecacuanha and camphor are remedies applicable to all the forms of asthma, and to all conditions of the system, at the time of the attack.

There can be no doubt, that asthma may frequently be much relieved by the skilful employment of mercurial alteratives, and I believe it possible even to cure some cases of the disease, both in its habitual and spasmodic form, by such means. The most superficial observer, who has seen many cases of asthma, must have often perceived it to be closely connected with a deranged state of the digestive organs, and symptoms of internal obstruction, when the efficacy of mercurial preparations is considerable. Therefore, under such circumstances, I

would advise the pill No. 98, page 119, to be taken every night, in addition to any other medicine that may be resorted to during the day. This pill may be advantageously persevered in for several weeks, but after the first week I recommend its exhibition only every second night.

I have remarked on the use of the *lobelia inflata* at p. 52.

Occasional blisters are very advisable, but a perpetual issue or seton in the side, arm, or between the shoulders, is of still greater effect, and sometimes proves a powerful remedy. It ought never to be neglected in bad cases, for if it fails to cure, it rarely falls short in relieving.

The inhalation of oxygen gas has been known to prove curative in asthma, and is worthy of more attention here than it usually gains. It is chiefly in those instances where the face is pale, and the strength reduced, that it is a valuable remedy, since its principal effects are those of a powerful tonic. Dr. Beddoes, of Bristol, who has related cases of asthma, treated with complete success by this means, observes, "no sooner does the oxygen gas touch the lungs, than the livid colour of the countenance disappears, the laborious respiration ceases, and the functions of all the organs of the chest go on easily and pleasantly again." Dr. Ferriar, of Manchester, has spoken in equally high terms of the inhalation of hydrogen gas. It seems to be more particularly applicable to those cases in which the complexion still continues florid, and the general strength is but little impaired, especially in the dry or spasmodic asthma.

Dr. Wilson Philip has discovered, that, in habitual asthma, the application of galvanism is often of great benefit, and sometimes effects a complete cure. He states, that it seldom fails to relieve the difficulty of breathing, and the symptoms of indigestion present. From eight to sixteen four-inch plates of zinc and copper, are sufficient in power with a fluid composed of a hundred and twenty parts water and one part muriatic acid. The galvanism is applied in the following manner:— Two thin plates of metal, about two or three inches in diameter, dipped in water, are applied, one to the nape of the neck, the other to the lower part of the region of the stomach. The wires from the different ends of the trough are brought into contact with these plates, and as great a galvanic power maintained, as the patient could bear without complaint. In this way the galvanic influence was sent through the lungs, as much as possible, in the direction of their nerves. It is proper, constantly to move the wires upon the metal plates, particularly the negative wire, otherwise the skin is injured in the places on which they rest. The relief seems much the same, whether

the positive wire is applied to the nape of the neck, or the pit of the stomach.

The galvanism is to be discontinued as soon as the patient says that the breathing is easy, which varies from five to fifteen minutes. It is remarkable, that in several who had laboured under oppressed breathing for from ten to twenty years, it gave relief quite as readily as in more recent cases.

In all inflammatory cases of asthma, the application of galvanism would be injurious; and in cases arising from dropsy, or any other mechanical impediment, little or nothing, it is evident, is to be expected from it.

We have reason to believe, that the chief immediate cause of habitual asthma, is a deficiency of nervous power in the lungs, and experiment proves, that galvanism has a greater and more immediate effect in restoring the nervous influence to these organs, than any other remedy. It is from this property, therefore, that it is so frequently found of such essential service in this complaint, when no ordinary means are able to reach the case. Mr. Cole, the house-surgeon of the Worcester infirmary, states that no other means there employed have been equally efficacious in relieving this disease; indeed it is asserted that this remedy has succeeded there in curing and relieving asthma, in the ratio of ninety cases out of one hundred.* Mr. La Beaume likewise says, in referring to his own practice, "many instances of habitual as well as spasmodic asthma, recurring in winter or summer, after certain intervals, have been perfectly and permanently cured, in patients of different ages, by galvanism." In my opinion, this remedy has not gained that confidence and attention, in the treatment of asthma, which it merits both from the patient and practitioner.

Among other instances of remarkable recovery in the present malady, from the skilful use of galvanic influence, Mr. La Beaume relates the following very satisfactory case.

"About seven years ago, a gentleman far advanced in life came to me for relief; his breathing was hurried and very laborious, and he had been for more than twenty years constantly suffering from habitual asthma, and a great difficulty in expectorating the tough viscid phlegm, which almost impeded respiration. In a very few minutes after he was subjected to the galvanic current, his breathing became perfectly easy, and he was able to expectorate freely, and to walk up stairs

* "It appears from accurate experiment, (says Dr. Philip), that after the nervous influence of the lungs and stomach have been greatly impaired by dividing the eighth pair of nerves, (which supply the stomach and lungs), and folding back one of their divided ends, in consequence of which digestion is suspended, and the breathing rendered difficult; the animal can be made to breathe with freedom, and digest his food by sending the galvanic influence through the lungs and stomach." These facts demonstrate the power of galvanism in restoring the nervous energy of the lungs, and illustrate its mode of action in relieving asthma.

without any difficulty. After a month he obtained perfect and permanent recovery."

Equal success has attended the administration of this means in France, and hoping that the relation of another case, in which it succeeded, may tend to excite a more general attention to its superior value in this very distressing complaint, I have abridged the following particulars from the *Revue Medicale*, published in Paris.

"A lady, thirty-two years of age, had been asthmatic for ten years. The day previous to her being galvanized for the first time, this lady was seized at midnight with a fit of asthma, which continued till three in the morning; and for a fortnight antecedently, she had been attacked regularly every day, in the same manner, and at the same hour. The paroxysms were attended with the following symptoms: they were ushered in by a severe fit of coughing, and the patient soon became in danger of suffocation; she was then lifted up, (for she had not strength sufficient to do it herself,) and placed near a chair, against the back of which she supported herself. The doors and windows were obliged to be opened, in order to obtain a current of air, the rattle and the cough were so violent, that the neighbours were disturbed by them; and, besides these symptoms, there was a sense of choking present. At the termination of each paroxysm, the patient was completely exhausted. In the course of the complaint, the attacks generally returned for fifteen or twenty days in succession, when they abated for two or three weeks, and then recurred with increased violence. This patient was galvanized eight times in the space of a fortnight, at the expiration of which period she was presented in a very satisfactory state before the Society of Medicine, by her medical attendant, M. Secondat. The first application of this power, was followed by an alleviation of all her symptoms."

In asthma, the warm bath is generally hurtful, but the cold bath proves very often extremely useful. It must be used only during the absence of the fit, and seems particularly beneficial to persons of great constitutional vigour. In 1793, a Dr. Ryan published a valuable work on asthma, in which he adduces many instances of successful treatment by the cold bath, and recommends it strongly.

The smoking of tobacco, or stramonium, is now and then of service, although some physicians object to the practice. See p. 83. It would seem to be more especially applicable to humoral asthma, or that form of the complaint in which the patient expectorates rather copiously, and where there is no great fulness of habit.*

For the flatulency accompanying this disease, the following

* "*Stramonium* is one of the best remedies that can be prescribed in the spasmodic form of asthma. It is principally used by smoking it as tobacco."—*Dr. Copland's Dictionary of Medicine*, p. 148.

may be found an appropriate and efficacious medicine. It will also frequently relieve the cough and oppression of the chest.

Take of distilled vinegar, three ounces; powder of ipecacuanha, four grains; water, three ounces:—Mix, and take four tablespoonfuls every four hours, or as occasion requires.

A distressing pain sometimes affects the integuments of the head, and generally at the back of the head. I have known a blister afford perfect relief in this pain, but in general the most effectual remedies are stomachic and volatile medicines, with diaphoretics, as the draught, No. 32, or the mixture, No. 77, or 78, which may be accompanied, if necessary, with a pill containing three grains of the compound ipecacuanha powder, twice or thrice a day.

The diet must uniformly be light, and easy of digestion, consisting chiefly of fresh animal food, eggs, bread, tea, cocoa, &c. That recommended under the head of *Indigestion* is the best that can be resorted to. A waistcoat of wash leather, or flannel, worn constantly next the skin, from September to May, inclusive, is highly to be recommended.

With respect to regimen, the points most worthy of attention are, to keep the bowels regular, by the occasional use of the mild aperient, No. 100, page 120; to preserve the surface of the body warm, avoiding damp, wet, and the east and north-east winds; and to take daily exercise in the open air, when the weather permits, short of fatigue. Horse and carriage exercise are by far the best. Removal to a milder climate is highly advisable; and what is said on this point under the head of *Consumption* is applicable here. The Isle of Wight, Cornwall, and the southern parts of Devonshire, are the most eligible situations for asthmatic persons, most of whom live there with far greater comfort and security, than in any other part of Great Britain.

OF BARRENNESS.

The *causes* of barrenness are various, but the most usual kinds are, 1. Barrenness from impotency or imperfection, or abolition of the conceptive power; 2. Barrenness from the monthly discharge being either morbidly retained, or secreted with difficulty, or in profusion; 3. Barrenness from personal aversion, or want of appetency. And the first kind may be either atonic or organic, that is, proceeding from direct imbecility or want of tone, or produced by some structural hindrance or defect, whether natural or accidental.

In the first kind, proceeding from imbecility or want of tone, the proper remedies are, local and general tonics, and stimulants, especially cold bathing, preparations of iron with bitters, as No. 102, or 103, page 121, electricity, blisters, issues, or setons, and ginseng, combined with change of air and scene. Abstinence for a time is likewise very advisable.

If this description be produced by some hindrance or defect in the structure of the parts concerned, the most efficacious course consists of alteratives, as the pill No. 98, page 119, at night, with ten or twelve ounces of the compound decoction of sarsaparilla, in divided doses during the day, and an occasional tepid bath at about 95 degrees, the bowels being kept regular with a mild aperient pill.

When the barrenness arises from irregular menstruation, the cure must depend upon a removal of the particular kind of morbid affection that operates at the time, and lays a foundation for the disease, the proper means for effecting which will be found under the head of *Menstruation*, *Retention of the Menses*, and *Suppression of the Menses*.

Female sterility from personal aversion is a complaint irremediable by the healing art, and can only be attacked by a kind, assiduous, and very affectionate attention, which will rarely fail of its object.

In my *Treatise on the Diseases of Females*, I have entered at some length into the causes and management of female sterility, and refer the reader to that book; but would here remark, that a Dr. Taylor, who many years since practised in this place, when consulted on the point, looking to the probable advantage of a spare diet, used to place both the husband and wife on a diet of milk and vegetables, and by this means he succeeded in several instances, in realizing the hopes of a family.* This is, I think an excellent practice, where it is not contra-indicated by any peculiar condition of the parties, and especially when conjoined with an active life, in a good country air. The effects of a spare and rather low diet upon the procreative powers are certainly remarkable, and within the sphere of every man's observation; for the married poor almost every where abound with children, while the rich are often childless, and large families among them are comparatively rare. Twins are extremely

* "I remember Dr. Taylor, the milk-doctor, of Croydon, pointed out to me two or three opulent families in his neighbourhood, who, after marriage, had continued several years without posterity, and were extremely solicitous about it; and whom, in two or three years' time, he had brought to have several fine children, by keeping both parents, all that time, to a total *milk and seed diet*. This he solemnly averred to me, and we know, that even old *Homer* had observed, that the feeders on milk were the *most honest* of men."—*Cheyne's Natural Method of Curing the Diseases of the Body*, 1742, *p.* 281.

common in the Highlands of Scotland, and still more so in Ireland, where the diet of the majority of the inhabitants is scanty, and of no very nutritious qualities. In the Lying-in Hospital in London, twins occur once in every 85 births, and three children at a birth, once in every 14,393; while in Dublin, the proportions are 1 to 49 for the former, and 1 to 1,462 for the latter.

OF BILIOUS COMPLAINTS.

The disorders of the liver have attracted so great and unreasonable a degree of attention of late, both from the profession and the public at large, that it is exceedingly common for almost all complaints subsisting within the abdomen (or belly,) to be resolved into some irregularity or deficiency in the secretions of that organ; and as by far the greater number of disorders found among civilized men, whether local or general, originate or centre in the aberrations of the important organs of digestion, and are most readily cured by the employment of remedies which have the power of bringing them again into a healthy state, the prevailing opinion of the paramount influence of the bile over the well-being of our whole frame, has appeared so well founded, as to have gained almost universal belief, and the terms *bilious* and *liver* complaints are, consequently, become *fashionable*, and are freely employed by persons of every rank and condition. But this prevailing opinion has no real foundation in truth. The liver is, indeed, a large organ, and it is unquestionably of some consequence that its secretion should be healthy and in proper quantity; but, though large, it possesses only a faint sensibility, and a very imperfect organization, when compared with what we find in the stomach and bowels, and the use of the bile which it secretes is by no means clear. On the contrary, the digestive canal, (that is, the stomach and bowels,) has an exquisite sensibility, and a most delicate structure; the value and use of its secretions are great and unequivocal; and the sympathy which it exerts in its functions over other parts of the body, is striking and universal. From these facts, the present author concludes, that the liver is a viscus of inferior moment, and that those maladies which are now so generally called bilious and liver complaints, are, in reality, disorders of the stomach or bowels, or both. If the existing evil be obstinate, and attended with pain in the right side, it is common to call it "*liver complaint;*" if less severe, "*bilious.*" But by far the greater number of both these cases, are examples of *Indigestion*, dependent upon an unhealthy condition of the digestive tube, and thus the author hopes his readers will

constantly view them, knowing, from sufficient observation and experience, that as such they are invariably most safely and successfully treated.

For the symptoms and treatment of bilious complaints, the reader is, therefore, referred to *Indigestion*. But before quitting this subject, I would remark, that whether these prevailing maladies are considered bilious or stomach complaints, *it is certain* the administration of much mercury is never necessary, and always hurtful. A little calomel, or blue pill, for example, one grain of the former, or four or five grains of the latter, given every day, or every other day, is frequently of great service, but beyond this they are seldom safe; and now that calomel is so frequently and largely administered, to the great injury of those who thus take it, this is a point worthy of serious attention.*

Some persons, troubled with bilious affections, are in the habit of taking calomel pills for the removal of their disorder; others have frequent recourse to emetics, or purges: both these measures are wrong in principle, and bad in practice. They are wrong in principle, because these complaints necessarily imply the existence of weakness and disorder of the stomach and bowels, in other words, of deficient and irregular action, and such means are not calculated to remove the former, nor correct the latter; and they are bad in practice, since both calomel and emetics, when frequently repeated and long continued, cannot fail to aggravate and confirm the evil they were intended to cure. They often afford present relief, I allow, but that very relief is but a prelude to another attack, from the inefficacy of the means employed, and the increase of weakness they have occasioned.

One of the most useful plans of treatment in bilious disorders which I am acquainted with, consists in carefully regulating the bowels by an occasional use of the pill, No. 100, or No. 101, and in taking at the same time the alkaline solution, page 2, or the strengthening pills, No. 102, or No. 103, page 121, two or three times a day, great attention being paid to diet and regimen, and the region of the stomach and bowels being well rubbed, twice a day, with the flesh brush. The dandelion is a valuable medicine. A tepid bath at 95 degrees, three times a week, is often useful, and daily active exercise in the open air is essentially necessary. I am in the habit of saying, that a rigid twelve months' course of *training*, with the use of the pills No. 104, will perfectly cure six cases out of seven of the most severe bilious disorder; and I have no

* See my *Treatise on Indigestion*, in which this subject is investigated more at length.

doubt that an extensive experience of the extraordinary effects of this plan will uniformly sanction the correctness of the opinion.*

OF DISEASE OF THE BLADDER.

There are two complaints affecting the bladder, which ought not to pass unnoticed in the present volume, as they are sometimes extremely distressing, and alarming: they are, an irritable painful state of the organ, and a thick whitish discharge from it.

THE IRRITABLE BLADDER

Is generally a very painful malady, in which the patient is distressed by a frequent desire to void his urine, accompanied with great pain in the region of the bladder; and, in the continuance of the disease, the former symptom becomes at length so urgent, that he cannot pass more than ten or fifteen minutes without feeling the inclination to recur. In this case, the bladder is the subject of chronic or slow inflammation, when the stimulus of the urine is such as to excite excessive pain, and an incontrolable desire to part with it nearly as soon as secreted. This is proved by the degree of pain felt being invariably in proportion to the quantity of urine contained in the bladder, and also by the nature of the means which are found most effectual in curing the disease, which are detailed below. Sometimes in this complaint the urine is mixed with blood; and should it go on to produce ulceration in the organ, there will be a discharge both of blood and mucus, and frequently of matter (pus).

Perhaps the most common *cause* of the present disease, is retaining the urine for a considerable time after feeling an inclination to part with it. This cause alone has been known, in many instances, to induce the complaint in a most severe degree, and has occasionally even proved fatal. This affection is likewise not unfrequently a consequence of gonorrhœa; and sometimes it accompanies stricture.

It may be *distinguished* from stone in the bladder, by observing, that, in the latter complaint, severe pain is felt after the water is voided, while in irritable bladder its expulsion is always followed by considerable, and sometimes perfect, relief.

The objects to be accomplished in this case, are to keep the organ in a state of rest and ease, by constantly wearing a

* For an ample account of the system of *training*, see the "*Sure Methods of Improving Health*," or the Art of Living comfortably, by regulating the Diet and Regimen.

catheter; and to allay pain and irritation, by the internal use of alkalies, combined with opium, occasional doses of calomel and opium, cupping on the loins, the warm bath, and warm fomentations, &c.

When, therefore, a patient is suffering from irritable bladder, he should immediately have ten or twelve ounces of blood taken from the loins by cupping; a blister should then be placed on the lowest part of the belly, over the region of the affected organ, after the part has been shaved, and a grain of opium mixed with a grain of calomel, and made into a pill, be taken directly, and repeated every night, or twice a day if the symptoms are severe. The anodyne enema, No. 9, page 97, may also be injected with considerable advantage, and warm fomentations, with the tepid bath, at 97 or 98 degrees, are proper. Through the whole course of the complaint, the bowels must be preserved free from confinement, by the use of castor oil.

To keep the bladder in a state of rest, a short flexible catheter should be introduced without delay, and constantly worn by the patient until he has perfectly recovered. This instrument affords great ease, by allowing the urine to escape as fast as it is secreted by the kidneys, thus keeping the bladder continually empty. The point of the catheter should only just enter the bladder, to accomplish which it is necessary to pass it to the extent of about nine inches, when, after the remainder has been cut off, its point should be tied to a bandage carried between the thighs and round the loins. As much quietude as possible must be observed.

The foregoing means will afford immediate and sensible relief, and alleviate the acute symptoms, when the patient will act wisely to take fifteen drops of the *liquor potassæ*, or from half a tea-spoonful to a tea-spoonful of the *alkaline solution*, (page 2,) with four drops of laudanum, three or four times a day, in barley-water; and this medicine, if it agree, should be continued for a month or more, till the cure is established. As the patient recovers, the quantity of opium may be gradually lessened to one or two drops in a dose.

It is proper to remark here, that now and then the irritability of the urinary passage, as well as that of the neck of the bladder, is so great, as to render it impossible to pass the catheter without occasioning considerable pain, and subsequent increase of the irritation for some days. This is a rare occurrence, but when it does happen, the catheter must be laid aside altogether, and the other means just noticed trusted to alone.

When the case is of an aggravated nature, and the bladder has become ulcerated, the same treatment ought to be adopted,

as it is the most effectual one with which we are acquainted. Here the remedies will require a longer perseverance, and instead of the pill of calomel and opium simply, as prescribed above, I should prefer the pill No. 99, page 120, or that marked No. 98, page 119, given regularly every night, or twice a day, with the alkali and opium, as just recommended. The powder of bear's whortle-berry is a medicine of great power in ulcerated bladder. See page 10. The powder of whortle-berry, combined in equal proportions with the powder of sarsaparilla, will be found very efficacious in most diseases of the bladder. Half a drachm of each may be given, twice or thrice a day, in cinnamon or dill water.

The *buchu* leaves, and *pareira brava*, are often of great service in irritable bladder. In some cases they will be found of greater efficacy than either of the medicines previously noticed. The mode of using them is explained at pages 13, 67. If it seemed desirable, the whortle-berry or sarsaparilla powder might be taken either in an infusion of the buchu leaves, or a decoction of the pareira brava.

In some severe cases of irritable bladder, the patient is compelled, by the painful symptoms present, to have recourse daily to large doses of opium, or of some other anodyne. As it is of consequence to avoid the frequent use of large quantities of opium, I would recommend, in such cases, a trial of the compound ipecacuanha powder, combined with extract of hemlock, or henbane, which will be found very valuable. The form, No. 110, page 123, is proper. One or two pills may be taken once, twice, or thrice a day, according to the exigencies of the case. In some instances, the proper use of this combination will have more than a palliative effect.

OF MUCOUS DISCHARGE FROM THE BLADDER.

Now and then we meet with a patient who discharges by the urethra, a large quantity of thick ropy mucus of a yellow colour, unmixed with blood, which medical men call the mucous disease of the bladder. In general, this discharge is produced from the internal surface of the kidneys, ureters, and bladder.

Its *causes* are various. When there is a disposition in the parts affected to so free a secretion, whatever deranges the general health, or directly impairs the energies of the urinary organs, may be productive of this complaint.

TREATMENT.—The best remedies here are the pareira brava (page 67), buchu leaves (page 13), balsam of capivi, the oxy-

muriate of mercury, and alkalies. If the patient tries the capivi balsam, he should take ten or fifteen drops three times a day, on sugar, or in water, or mixed with mucilage of gum arabic and water. If the disorder resist the use of this medicine, and also of the pareira brava, or buchu leaves, which is not often the case, thirty drops of the solution of oxymuriate of mercury, and half a drachm of sweet spirit of nitre, may be taken in water, thrice a day. Whatever medicine be resorted to, soda water should be the patient's sole beverage; and the bowels ought to be preserved free from any accumulation by the mildest measures, as the use of small doses of castor oil, or the pill No. 100, page 120.

OF BLEEDING FROM THE NOSE.

A considerable discharge of blood from the nose is usually preceded by chilliness, coldness of the limbs, weakness, pains of the back and head, costiveness, frequent, full, and sometimes hard pulse, with heat, fulness, and tension about the nose, strong beating of the arteries of the head and neck, and flushing of the face; but occasionally bleeding from the nose, like all other bleedings from constitutional causes, makes its appearance without any preceding symptom, especially when it is inconsiderable.

Whatever are the symptoms preceding this flow of blood, the chief cause generally lies in an unhealthy condition of the constitution, or in a confined state of the bowels. The former seems to obtain most frequently in adults, and the latter in children.

It is very seldom dangerous.

Treatment. In the treatment of this discharge of blood, it is necessary we should first consider, whether it be owing to a plethoric or a debilitated state of the body, and whether it appear to afford relief from any previous unhealthy symptom, or is attended with manifest injury. For, in full habits, where there is considerable corporeal vigour, it is generally attended with advantage, and our principal regard should be paid to prevent its continuing too long, or being too profuse; while in weakly persons it is frequently hurtful, and for the most part requires to be checked without delay.

If, then, a considerable hæmorrhage from the nose occur in a young or middle aged person, in whom no weakness is apparent, but rather a sufficient circulation of blood, the best and most proper remedies will consist in local astringents, and emetics. The face may be frequently immersed in the coldest water, and the temples, or even the whole head, be surrounded

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with a band or napkin moistened with it, and frequently changed. Cold applied to the back by means of cold cloths, or any cold metal, as a bit of tin, will frequently succeed, but it is still more certain if applied to the genitals; or cold water and vinegar may be thrown up the nostrils with a syringe. These means will seldom fail to check the flow of blood, but when they do, an emetic of twenty grains of ipecacuanha powder may be administered in water, which is often a powerful remedy. It may now and then be requisite to give the patient ten drops of the tincture of digitalis three times a day, when the foregoing means are not perfectly successful. The diet in this case should be small in quantity, and consist of the simplest articles.

It is usual, in any large bleeding from the nose, to let blood from the arm, and it may now and then be advisable; but it is by no means so desirable a practice as many medical men think, for if the bleeding takes place in a strong person, particularly if full of blood, it is often a salutary effort of the constitution to relieve itself, which relief ought to be, and will be much better attained by allowing the blood to flow from the nostrils, than by substituting an artificial abstraction by means of the lancet, our care being to prevent the discharge from being excessive, by the use of astringent applications. Should the hæmorrhage, on the contrary, occur in a weakly person, it seldom has its foundation in any thing else than debility, when, of course, the employment of the lancet would be highly reprehensible.

When bleeding from the nose occurs in debilitated habits, the arterial action is weak, the blood frequently thin and of a diluted red, and it generally flows without heat or head-ache. Here bleeding must never be had recourse to, except there is satisfactory evidence of congestion existing in or near the part, which is very rare. The general rule is to proceed at once with a tonic plan of treatment, giving ten or fifteen grains of powdered bark, or a pill composed of five grains of carbonate of iron, and a third of a grain of powdered aloes, with a little extract of gentian, three times a day, applying the cold astringents locally, as above noticed. Should the bleeding be obstinate, the following pill may be resorted to as one of the most efficacious medicines that can be given:

> Take of superacetate of lead, five grains; powdered opium, two grains.—Mix, and make, with a little conserve of roses, into five pills. One to be taken three times a day.

The diet should be mild but nourishing; and, if the loss of blood has been great, and has occasioned considerable exhaustion, a little port wine may be given immediately, or a little quinine.

In all cases, the bowels should be opened by some mild aperient. Children of a costive habit, who are subject to frequent bleeding at the nose, will find a great advantage from having a mild opening pill, or powder, No. 100 or No. 121, administered every other night, or three times a week, for six or eight weeks, continuing it afterwards occasionally, so as to prevent constipation.

OF BLOOD DISCHARGED FROM THE BLADDER.

The chief causes of this discharge of blood, are a stone in the bladder; a violent blow on the kidneys, or bladder; or general weakness and indisposition.

The treatment is the same as has just been described in case of bleeding of the nose. It is, however, most frequently dependent upon debility, and the most efficacious remedies are the superacetate of lead, and the tincture of muriate of iron. Twenty or thirty drops of the tincture of muriate of iron may be taken in water every hour, or every second hour, till the bleeding stops.

Whatever are the medicines resorted to, the compound powder of ipecacuanha may be given with great advantage at the same time to allay pain and irritation. Three or four grains, three times a day, is the proper dose. The use of mucilaginous drinks will likewise be very proper, as a strong solution of gum arabic in water, linseed tea, or decoction of marshmallows.

If the blood is discharged mixed with mucus or pus, and is of a slow protracted character, the pareira brava or the buchu leaves may be tried; or twenty grains of fresh whortleberry powder, taken three times a day, is often of much benefit, and the pill, No. 99, page 120, may be taken every night, at the same time.—See *Irritable bladder*, page 260.

OF BLOOD DISCHARGED FROM THE BOWELS.

Now and then blood is suddenly discharged from the bowels, without the presence of dysentery; in which case the superacetate of lead, as in the preceding page, or the tincture of muriate of iron, internally, with cold applications externally, form the most effectual means of checking it.—See *Bleeding from the Nose.*

OF BOILS.

A boil is a small tumour common to every part of the surface of the body, hard, circumscribed, acutely tender to the touch, and suppurating with a core in the centre. It is chiefly found in persons of a full habit, and great vigour, but is sometimes met with also in debilitated patients, who are evidently suffering from ill health.

When it occurs in the strong and vigorous, some cooling opening medicine should be given, as No. 73 or 74, page 114, and a common poultice be applied to the boil till it suppurates and breaks, when it may be dressed twice a day, with the calamine cerate, or saturnine ointment, till it heals. If the ulcer gets into a chronic state, and wants stimulating in order to its healing, apply an ointment composed of two parts of spermaceti ointment, and one part of the ointment of nitrate of mercury. The composition of these ointments is to be seen at page 117.

Boils not unfrequently arise in weakly habits, and where the constitution is evidently in an unhealthy state: in such cases the alterative pill, No. 98, page 119, given every night, or every other night, with an aperient pill occasionally, will be found of great service. The powder or compound decoction of sarsaparilla is likewise an excellent medicine, and may be taken at the same time, and sometimes quinine will be serviceable.

OF BOILS ON THE GUMS.

Gum-boils are sometimes limited to the substance of the gums, and sometimes connected with the decay of a tooth or socket. In the first variety, it is a disease of only a few days duration, and ceases almost as soon as it has burst, or is opened; in the second, it will often continue troublesome till the carious tooth is extracted, or the carious socket has exfoliated, or the whole of its texture is absorbed.

Gum-boils, when connected with an unhealthy condition of the subjacent teeth, rarely disperse without passing into suppuration, and it is, therefore, generally better to encourage this process by the use of warm fomentations, or cataplasms, than to repel it. If much pain is present, the application of a leech or two to the parts may be of great service. An early opening of the tumour is of importance, as, from the structure of the parts concerned, the walls of the abscess are mostly tough and thick, and the confined matter seldom obtains a natural exit with sufficient freedom. A little mild opening medicine, as No. 73 or 74, page 114, every other day, will

be found useful; and after the abscess has burst, or been opened, washing the mouth twice or thrice a day with an astringent lotion will tend materially to make the cure permanent. Twenty grains of sulphate of zinc, dissolved in half a pint of rose-water, will be a suitable lotion for this purpose.

OF BREAST-PANG.

This is an acute constrictive pain about the breast-bone, extending towards the arms, attended with anxiety, difficulty of breathing, and a sense of suffocation. It is called by medical men *angina pectoris*.

Those afflicted with this disease are seized while they are walking, (more especially if it be up hill, and soon after eating,) with a painful and most disagreeable sensation in the breast, which seems as if it would extinguish life, if it were to increase or continue; but the moment they stand still all this uneasiness vanishes. The pain is sometimes situated in the upper part, sometimes in the middle, and sometimes at the bottom of the breast-bone, and often more inclined to the left than to the right side. In the beginning, it often extends only to the top of the shoulder or middle of the arm, but soon finds its way to the elbow, wrist, and fingers' ends. The pulse is, at least sometimes, not disturbed by the pain.

After it has continued a year or two, or more, it will not cease so instantaneously upon standing still, and it will come on not only when the persons are walking, but when they are lying down, especially if they lie on the left side, and oblige them to rise up out of their beds. In some inveterate cases, it is brought on by the motion of a horse or a carriage, and even by swallowing, coughing, going to stool, or speaking, or any disturbance of mind. When the complaint has been of long standing, the pain will sometimes last a considerable time; indeed so long, that I have known it professionally treated, by very active measures, as the pain of inflammation.

The cause very often lies in some kind of positive disease in the structure of the heart, or its larger blood-vessels; but sometimes it is only a spasmodic affection, arising from imperfect digestion, &c. According to my experience, spasmodic breast-pang, occurring in persons below forty, is much more frequent now than formerly, and the reader will find under *Neuralgia* some further remarks on this point.

Men are most subject to this malady, especially such as have past their fortieth year, and those who have short necks, and are of a corpulent habit. Frequent attacks of acute rheuma-

tism or gout seem strongly to dispose to diseases of the heart, and to give rise to this complaint; and it is invariably much aggravated, whatever may have been its original cause, by anxiety, excessive exertion of mind or body, and food of difficult digestion. An indolent or sedentary studious life may cause it, especially if distress of mind be superadded.

Some authors have scarcely witnessed it under fifty years of age, but I have seen an unusually well marked case in a gentleman about thirty. He was a very rheumatic subject, (this was the person referred to under acute rheumatism,) and died suddenly of an attack of *angina* at the age of thirty-six.

Perhaps the most common opinion among physicians is, that the disease is a species of *neuralgia* of the nerves of the lungs and heart, affecting the functions of the heart and respiratory organs, and extending, by nervous connection, to other parts; the organic lesions found in fatal cases being either causes, coincidences, or effects of the disease. To this opinion I subscribe.

The acute constrictive pain across the chest, running down the left arm, supervening suddenly upon motion, and as quickly relieved by rest, taken in conjunction with the age of the patient, is sufficiently distinctive of this affection.

Treatment.—During the paroxysm, effectual relief is generally obtained by quiet, rest, opium, and cordials. When attacked, the patient should invariably and immediately sit or lie down, and take thirty drops of laudanum, or twenty of Battley's solution, in a glass of lukewarm water. Battley's solution of opium is a valuable palliative in this complaint, and preferable to laudanum. Or a little warm brandy and water, or half a tea-spoonful of ether, in water, may be taken.

Some physicians have recommended a small bleeding, especially if the patient be of a full habit; others prescribe an emetic to carry of the paroxysm. But they appear to me to be at best but very doubtful remedies, except there is a well-marked fulness of habit, and I fully concur in the opinion of Dr. Heberden, who was the first physician who published a full and perspicuous account of the disease, that in general bleeding, vomiting, and purging, are improper.

The most powerful remedies, in the intervals of the fits, are the metallic tonics, as oxyde of bismuth, sulphate of zinc, and preparations of iron; sulphate of quinine; ammoniated tincture of guaiacum; blisters or issues; and such a plan of diet and regimen as is calculated to allay irritation in the digestive organs, and to invigorate the general system. When the disease depends upon a faulty state of the organs of digestion, these

means will often perfectly succeed in curing the patient, and when it is owing to organic injury of the heart, they will frequently be very useful, and rarely fail of affording relief.

A grain of sulphate of zinc, or three or four grains of the oxyde of bismuth, may be made into a pill with extract of hop or gentian, and given three times a day; or the pill No. 102, page 121, may be taken in the same manner. I have found the ammoniated tincture of guaiacum very useful, and it appears to me to be particularly indicated where the disease has followed acute rheumatism. An issue on the breast, or between the shoulders, or a perpetual blister, should be resorted to at the same time. The mezereon issue is a good one; see page 55. In all cases, a local drain of this description is likely to be of much service, and when the disease has followed the sudden suppression of any habitual discharge, it is highly necessary. The eruption effected by the use of the tartar emetic ointment, will often be of more immediate and lasting benefit than what follows either an issue or blister. Whatever other medicine is taken, the bowels must be kept regular by an occasional use of the pills, No. 100, page 120; and when there is any considerable irritability present, or want of sleep, twenty drops of Battley's solution of opium, or six or eight grains of the extract of henbane, may be administered at bed-time.

The diet should be light and sparing; all spirituous and heating liquors must be given up; the exercise indulged in be of the gentlest kind; and all anxiety and violent emotions of the mind be carefully avoided. The diet and regimen advised under *Indigestion*, and at pages 244, 245, are the best that can be advised.

The nitrate of silver, and other metallic remedies, beside those above referred to, have been recommended for the cure of this affection; but men now are ever hunting after new remedies, and too seldom satisfied with either the new or old, and we ought to be on our guard against this desire for novelty. The means previously described will always succeed if any will, and our chief business should be to apply them in the most skilful manner, so as to meet the changes and exigencies of every case. Even arsenic has been praised for its effects in *angina pectoris*, but it appears to me to be a particularly ineligible medicine, since it has undoubtedly a strong tendency to produce disease of the heart. I may, however, mention, that prussic acid will sometimes be found very useful to allay the pain and irritability of the heart.

OF BRONCHOCELE.

On the fore-part of the neck a gland is found, called the *thyroid gland*, which is not perceivable in a healthy state of the body, but which sometimes enlarges to a considerable size, so as to deform the person, and impede the breathing. This is called *bronchocele*, or *Derbyshire neck*. It is *endemical* in Switzerland, where it is called *goitre*.

It usually appears as a soft and rather flabby swelling, lying across the fore-part of the neck, extending more or less to each side; and when much increased in size is pendulous. Sometimes it is irregularly swelled, in some parts soft, in others hard. It is free from pain, and is not discoloured.

It rarely appears in males, and is most commonly found in certain unhealthy districts, especially in the low, moist, and marshy valleys of Derbyshire, Nottinghamshire, Sussex, and Hampshire, in this country; and on the continent, those of Savoy, Switzerland, and Tyrol. The causes of this disease are enveloped in some obscurity, at least as it appears in many healthy parts of this country; yet it is generally found in girls of a delicate and loose fibre, and is not unfrequently connected with some kind of irregularity or disorder in the complaints peculiar to women. The drinking of hard spring water strongly disposes to the disease, if it does not actually cause it. My opinion is, that it is quite sufficient for its production. Captain Franklin says, that at Edmondstone, a part touched at in his journeys to the Polar Sea, bronchocele greatly prevails in those who drink the river water, and that those who use melted snow escape. He asserts, that a residence of a single year at this place is sufficient to give rise to the disease in a whole family, if they drink the common river water.

Occasionally tumours of a different description appear on the fore-part of the throat, but they are easily distinguished from bronchocele, by their more rapid rise,—redness of the surface,—pain, and increased temperature.

Treatment.—Many remedies have been recommended for the cure of this affection, but *burnt sponge*, *iodine*, and preparations of iron, are those only which can be depended on. I have some confidence, likewise, in mild mercurial alteratives at night, and tonic medicines, with a good air and diet, during the day. It is said that galvanism, with friction over the swelling with the iodine ointment, has completely removed a bronchocele, although neither was successful alone.

The burnt sponge may be taken in doses of ten or twenty grains, three times a day, in a little calf's foot or currant jelly;

or the patient may take the following pills, which is sometimes a more eligible form of administering burnt sponge:—

Take of burnt sponge, two drachms and a half; carbonate of soda, half a drachm; extract of gentian, a sufficient quantity to make the mass. Divide it into thirty-six pills, of which take three twice or thrice a day.

But the plan which I particularly recommend is, to take eight or twelve drops of *the solution of hydriodate of potash*, (made by dissolving half a drachm of the hydriodate of potash in one ounce of distilled water,) three times a day in barley-water; accompanying it with the use of a mild alterative pill, composed of two grains of blue pill, two grains of rhubarb, and one grain of extract of henbane, every other night. Or, instead of this pill, should there be disorder of the functions peculiar to women, one or two tea-spoonfuls of the electuary, No. 37, page 105, may be taken every night.

Another plan which I have adopted with success is, to rub a little of the ointment of hydriodate of potash into the swelling, night and morning, or (what appears to be still better,) a little of the ointment of iodide of lead, giving twenty or thirty drops of the tincture of muriate of iron, twice a day, in water.

The diet in all cases must be mild, nourishing, and easy of digestion. If there exists a good deal of debility or delicacy in the habit of females in whom bronchocele is found, the tepid bath, at 95 degrees, may sometimes be advantageously employed thrice a week, especially if uterine obstructions are present; or, during the heat of summer, cold sea bathing may be tried.

The continued use of burnt sponge or iodine, not unfrequently produces constitutional disturbance, indicated by pains in the limbs or joints, or faintness, trembling, palpitation, and other nervous symptoms; its effects must consequently be carefully watched. Considerable emaciation is a common consequence of the efficient use of iodine, but this we need not regard much, provided no other unpleasant symptoms arise; since by the use of quinine, or steel, or other tonics, with a generous diet and change of air, after the iodine has been discontinued, the patient's original plumpness may be restored.

Those who are able should remove their residence to a more salubrious part of the country, which has better water. I have lately been credibly informed of a case, in which the female on removing from Matlock to Deptford, near London, for a time, quite lost her bronchocele, without the use of any other means, and which returned after her return to Matlock.

OF BRUISES AND SPRAINS.

The best treatment for the slightest kinds of bruises and sprains, consists in giving rest to the part affected, and using one of the embrocations, Nos. 39, 40, or 45, page 105, three or four times a day.

The severer description of bruises will require the application of six or eight leeches to the part, or even make it desirable that eight or ten ounces of blood should be drawn from the arm, the patient afterwards keeping the parts perfectly at rest, and applying a cataplasm of linseed meal and vinegar, or crumb of bread and vinegar. This treatment is required, because of the tendency to inflammation, or actual inflammation resulting from very severe bruises. When all consequent inflammation has subsided, one of the above embrocations may be used with daily friction. It will frequently be necessary at the same time, to attend to the state of the constitution, supporting it by tonic medicines, and proper diet, when weak, and correcting it by alteratives and aperients, when disordered.

If a weakness be left behind in consequence of a sprain, cold water may be pumped every morning upon the part, and a calico or laced bandage worn to support it.

OF BURNS AND SCALDS.

Burns may be divided into *three states* or *conditions*, which division is a natural one, and absolutely necessary to be attended to, in order to their being treated with safety and success.

The first is, where the injury consists in a simple blistering of the outer, or scarf skin, which remains unbroken.

The second, where the outer, or scarf skin, is extensively separated from the surface of the true skin, so that the minute extremities of the nerves are exposed, which is most frequently the case from the application of fire.

The third is a still deeper injury, in which the life of the true skin is destroyed, and where the process of suppuration is absolutely necessary.

Treatment. The danger of *the first state* is but little, provided the vesications or blisters are not disturbed. It is a principal object to keep the blister from breaking, as a considerable discharge would come on, creating great irritation, and consequently danger. Cold applications are the best in these cases. The lotion, No. 69, page 113, added to half a pint of water, will be proper, and may be applied cold by means of linen

cloths dipped in it, which should be frequently renewed; or cold water, vinegar and water, or scraped potatoes, may be used. When the heat and inflammation have subsided, leave these off, and apply a liniment composed of three ounces of olive or linseed oil added to six ounces of lime-water, or dress the parts with the saturnine cerate, No. 94, page 118, spread on fine lint, or with an ointment consisting of equal parts of the lead and zinc ointment *(unguentum plumbi et unguentum zinci.)**

There is one case in which it is not advisable to employ cold water, namely, in cases of extensive scald. It appears that when the scald extends over a considerable space, the system feels the injury so much, and is so much disposed to flag, that the use of cold applications materially depresses the vital powers, and prevents a re-action.

Some American practitioners have asserted, that the best application for superficial burns is *raw cotton*, thinly spread out, or carded, and put directly on the injured parts. Many surgeons of our own country have reported of it very favourably. If its application causes pain, it is not suitable.

The danger attending on *the second state* described, is greater than in the preceding, owing to the increased sensibility of the parts, and the instant suppression of the natural functions of a large portion of the skin, and death may take place soon after such an accident, when extensive. In this case, the pulse is quick and small, the patient frequently chilly, and, if the termination is unfavourable, he ultimately falls a victim to the first impression. The best practice here is to apply lime-water and milk, in equal proportions, as a lotion; or the liniment of olive oil and lime-water, which may be frequently spread over the parts with a pencil or feather.

Take of lime-water, olive or linseed oil, of each, half a pint; rectified spirit of wine, an ounce.—Mix.

At the same time, it will be right to give the patient a little warm wine and water occasionally, especially if chilliness is

* "When the hot fluid has been directly applied to any exposed surface, as the hands, the speedy employment of the antidote, cold, will often prevent vesication," (blistering) "and the case will terminate by resolution. It more commonly, however, happens, that the part affected is at the time enveloped in some article of clothing, as the legs and feet with stockings; in which case more or less vesication is likely to occur, from the clothes retaining the hot liquid in contact with the skin. It unfortunately happens too frequently, under these circumstances, that the first thing that is done is to remove the stocking or clothes, which never fails to bring away with it large portions of the *cuticle*," (external skin,) "leaving the highly inflamed *cutis*," (true skin) "quite denuded. If, instead of this forcible removal of the clothes, such limbs were to be immediately immersed in the coldest water, this most serious result would generally be prevented."—*Earle's Lectures on the Treatment of Burns.* When it is requisite to remove the dress covering the part scalded, it should be very carefully cut away.

complained of, and about ten, fifteen, or twenty drops of laudanum, or of Battley's solution of opium, should be given once or twice in the first fourteen hours. As to the quantity of laudanum to be given, however, we must be guided by the pain, and symptoms of irritation, or of exhaustion present. The stupor with which patients severely burnt, are often attacked, receives more relief from opium than any thing else. If a good deal of irritation and fever be present, the fever mixture, No. 81, page 115, should be given through the day, until it is removed. A little mild aperient medicine will also be advisable; and the diet during the period of the symptomatic fever should be, for the most part, of a mild, vegetable, and farinaceous description. After a short time, the parts granulate, and throw up small red eminences, which is a necessary process previous to healing, when the following lotion ought to be applied by means of linen rags, and it will promote the formation of a new skin, even over an extensive surface.

Take of sulphate of zinc, twelve grains; cold water, half a pint.—Mix them together.

In *the third state*, though there is no immediate danger, yet there is a remote one, for the skin being destroyed, separates and forms an eschar, which must naturally debilitate the living powers, by calling on them beyond their natural capacity. In this condition, we find stimulating applications of the greatest service. The injured parts are to be bathed two or three times with spirit of wine, or spirit of wine with camphor, or spirit of turpentine. After this, let a liniment be applied on soft cloth, composed of the common yellow basilicon, softened with spirit of turpentine. This should remain on untouched for fifteen hours. At the second dressing, wash the parts with proof spirit of wine, or tincture of opium made warm, and then dress as before with the common yellow basilicon, softened with camphorated oil instead of turpentine. On the third day, milder applications must be employed, and a dressing once in twelve hours, of the saturnine ointment, No. 94, or calamine cerate, No. 95, will be most proper. Powdered chalk may be used to absorb any great degree of discharge from the ulcer.

It is not in general proper to give strong purgatives in burns. We must be cautious in the administration of this class of medicines, as *diarrhœa* is very apt to follow severe burns. The diarrhœa is usually the consequence of inflammation of the mucous or serous membranes of the abdomen. According to Baron Dupuytren, a French surgeon of celebrity of the present day, extensive and deep burns always occasion inflammation of the mucous or serous membranes of the digestive organs; a cir-

cumstance supposed to explain those curious instances of death, which so often occur when the ulcers are on the point of healing.

When burns are produced by gunpowder, some of the grains may be forced into the skin: these should be picked out with the point of a needle, and an emollient poultice applied, which will dissolve and bring away any particles of gunpowder yet remaining.

In this third state, of deep burns which must ulcerate, stimulants internally are likewise advisable, and a dose of laudanum should be administered after the receipt of the injury, proportionate to the age of the patient, and the severity of the symptoms. A little wine and water, or beer, should follow occasionally, till suppuration takes place, when any stimulant will no longer be required, excepting in a very moderate quantity, to support the strength under any great discharge.

In severe burns, and in warm weather, should the discharge be profuse, and the fetor considerable, there may be a generation of maggots, and a daily change of the dressings be called for; in which case the application of a solution of the chloride of lime is very beneficial. Two grains of the chloride of lime may be dissolved in an ounce of water, and lint moistened with this should be kept laid over the burnt parts.

In deep and extensive burns, Mr. Abernethy warns us, in his Lectures, against continuing the stimulating plan too long (it should seldom be continued beyond the third day.) By so doing, the patient will be brought into great danger. He cites the cases of the men burnt at Covent Garden Theatre, all of whom, that were in Bartholomew's Hospital, died in a few days of an extraordinary nervous affection, although they were previously apparently doing well. The sudden and fatal alteration he attributes to their friends having privately brought them wine and other cordials, so that they lived too freely.

Mr. Cleghorn's plan of managing these injuries may frequently be adopted with advantage. This gentleman, who was a brewer at Edinburgh, was induced to pay great attention to the effects of various modes of treating burns, on account of the frequency of those accidents among his workmen. He preferred the application of vinegar, which was to be continued for some hours, by any of the most convenient means, until the pain abated; and when this returned, the vinegar was repeated. If the burn had been so severe as to have produced a destruction of parts, these, as soon as the pain had ceased, were covered with a poultice, the application of which was continued about six, or at most eight hours, and, after its removal, the parts were entirely covered with very finely powdered chalk, so as to take away every appearance of moisture on the surface of

complained of, and about ten, fifteen, or twenty ... again danum, or of Battley's solution of opium, should ... every or twice in the first fourteen hours. As to the q... use of danum to be given, however, we must be guide... rtment, (as and symptoms of irritation, or of exhaustion ... still sprin- stupor with which patients severely burnt, are receives more relief from opium than any thing ...ed the vine- deal of irritation and fever be present, the fever ... them some- page 115, should be given through the day, ur... respect, in a A little mild aperient medicine will also be ad... to prevent diet during the period of the symptomatic fev... the most part, of a mild, vegetable, and farina... among medical After a short time, the parts granulate, and t... some recom- eminences, which is a necessary process pr... ones, and this when the following lotion ought to be applied ... ree and kind of rags, and it will promote the formation of a r... depended on. an extensive surface. ...experience, and

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the sore. This being done, the whole burnt surface was again covered with the poultice. The same mode was pursued every night and morning, until the cure was complete. If the use of poultices relaxed the ulcers too much, a mild ointment, (as No. 94, page 118,) was applied; but the chalk was still sprinkled on the sore.

In cold weather, Mr. Cleghorn sometimes warmed the vinegar a little, placed the patients near the fire, gave them something warm internally, and kept them, in every respect, in a comfortable situation. His object in doing so, was to prevent or lessen the symptoms of trembling or chilliness.

There has been a great difference of opinion among medical men respecting the proper treatment of burns, some recommending cold applications, others hot stimulating ones, and this has arisen from want of attention to the degree and kind of injury inflicted. The above directions may be depended on. They are the result of correct observation and experience, and contain the general practice of Sir Astley Cooper, and other eminent surgeons.

It should be remarked, that burns produced by hydrogen gas, (which are so frequently occurring in the extensive pits and works of the North of England,) differ in their nature from those arising from other causes, and require a somewhat different treatment; inasmuch as the former, although rather slight, require a stimulus, even from the beginning, which the others do not. It is in burns from the explosion of hydrogen gas, sometimes called choke damp, that the oil of turpentine is so very beneficial, as advised under the third variety in the preceding page.

OF CANCER.

Cancer is a hard tumour, intersected with firm, whitish, divergent bands, found chiefly in the excretory glands, or skin, which is capable of contaminating other parts, either by direct communication, or through the medium of the absorbents; is attended with acute and lancinating pains, and generally terminates in a fetid and ichorous ulcer. Its most common seats, are the female breast and womb, the lip, tongue, and private parts.

When cancer takes place in the breast, it usually commences with a small indolent tumour that excites little attention. In process of time, this tumour is attended with an itching, which is gradually exchanged for a pricking, a shooting, and at length a lancinating pain, a sense of burning, and a livid discoloration of the skin. And, however difficult it may be to determine the precise point of time in which the scirrhus first becomes con-

verted into a cancer, where these symptoms are united there can be no risk in calling the tumour by the latter name. Adhesive bands are now formed in the integuments, which become puckered; while the nipple is drawn inwards by suction, and in some instances wholly disappears: the tumour rises higher toward the surface, and feels knotty to the finger; at the same time that the subcutaneous vessels are distended with blood, and show themselves in dark contorted ramifications. The march of this disease may be slow or rapid, for it varies considerably in its pace; but at length the integuments give way in a few points to the ulcerative process, and a small quantity of caustic ichor is thrown forth: the ulceration continues to advance, spreading wider and deeper, till a considerable extent of surface becomes exposed, and a broad excavation is scooped out, with a discharge of a most peculiar and offensive fetor. The ulcer sometimes affords a delusive hope of recovery by its granulating; but the granulations are soft and spongy, are liable to bleed from the loose texture of the new vessels, and frequently while one part is covered with them, another part is sloughing.

When cancer attacks the uterus, it is known by tensive lancinating pains in this organ, shooting through the region of the pelvis; indurations in the part, sensible to the touch; a preceding and immoderate flow of the whites or menses, or both. As soon as the ulceration has worked to the surface of the organ, there is a serious, or bloody, or mixed discharge, characterized by the peculiar stench of the disease. By degrees, the external parts swell, and the swelling sometimes extends along the thigh.

On the tongue, lip, or any other part of the skin which is attacked by this disease, it usually commences with a small wart or pimple, which hardens by degrees, grows irritable and malignant, contaminates the neighbouring glands, and finally ulcerates.

Cancerous affections of the lip and skin are more within the control of art than those of the breast or womb; indeed, I have much reason to believe, that the former are very often curable when properly treated from the beginning.

A cold and variable climate; a deranged state of the general health; the change effected in the constitution of women at the time when the usual monthly discharge altogether ceases; with blows, and other mechanical violence, are the most common exciting causes of this complaint. But frequently there is no apparent cause, and when any of the above exist, we must almost invariably consider a disposition in the organ or part affected to take on the diseased actions of cancer, to be necessary to the actual development of this particular malady.

The *distinguishing marks* of this disease are its stony hardness to the feel; its being perfectly circumscribed, so that its whole extent and limits, unconnected with the surrounding parts, may be distinctly felt; its never, or very rarely, occurring but in the excretory glands or skin; and especially its power of contaminating other parts in its vicinity, either by direct communication, or through the medium of the absorbents.

TREATMENT. In whatever part the disease may be situated, the treatment resolves itself into that proper when the cancer is unbroken, and that which is required when there is ulceration, or open sore. The former is called occult, and the latter ulcerated cancer.

In the scirrhus, or unbroken cancer, the best local remedies are those which are cooling and astringent, being calculated to repress inordinate or irregular action in the blood-vessels of the part, and to promote absorption; with which alterative and tonic medicines must be given internally. The lotion, No. 68, page 113, will be found useful, or one of the following. Whatever lotion is used, it must be applied by means of linen rags, four or five double, which are to be kept constantly wet, and closely applied over and around the tumour.

Take of solution of acetate of ammonia, three ounces; rectified spirit of wine, an ounce; water, two ounces.—Mix them.

Take of carbonate of iron, two drachms; distilled vinegar, two ounces; water, twelve ounces.—Mix them.

The ointment of hydriodate of potash, made by mixing together half a drachm of hydriodate of potash, and an ounce and a half of recent hog's lard, always relieves the pain of cancer, and is sometimes of very signal service in lessening the size and hardness of such tumours. It will not unfrequently disperse very suspicious tumours in the breast and other parts. The size of a nut may be rubbed into the part twice a day, but its use should be discontinued for a week or two occasionally; because from being a very active medicine, it will not be proper to continue it for any length of time, without intermission. This ointment may now and then be advantageously alternated with the application of a warm bread and water poultice, or a poultice made with figs boiled in milk. The latter has been of great service in some instances.

The employment of a little camphorated mercurial ointment, rubbed into the tumour twice a day, is another local measure in common use use among medical men, and those who wish to try it may use about the size of half a nut, at each time; but it appears to me to be of very doubtful advantage. It is by no means so powerful a discutient as the hydriodate of potash.

It is a very usual practice to apply leeches to the swelling,

but I have never known any permanent advantage arise from it, and question whether it be not generally hurtful. I am aware the discharge of blood sometimes affords relief, but the benefit is transitory, and when the application of the leeches has been discontinued, it has appeared after a short time to have really tended to increase the rapidity of the subsequent progress of the disease. On this account, I could not advise it, and believe that some of the most eminent surgeons are likewise averse to it.

All cancerous diseases are aggravated by debilitating measures, and relieved by those which strengthen, and which have the power of exciting a new and salutary action in the diseased parts. Therefore, in every case of cancer, every thing which weakens must be studiously avoided, and tonic and alterative medicines internally, be conjoined with external applications. The alterative pill, No. 98, page 119, taken every night, or every other night, will be found very useful, and may be accompanied with the strengthening pills, No. 102, through the day, or the following:

Take of sub-oxy-phosphate of iron, two drachms; ipecacuanha, in powder, twelve grains; best aloes, in powder, six or eight grains; mucilage of gum arabic, a sufficient quantity to form the whole into a mass. Divide it into thirty pills, and take first one, then two, thrice a day.

Sir Astley Cooper recommends the following tonic draught to be taken twice or thrice in the day.

Take of compound infusion of gentian, an ounce and a half; tincture of columba, a drachm; carbonate of ammonia, five grains; carbonate of soda, half a drachm.—Mix.

The extract of hemlock, *prepared in vacuo*, is sometimes very serviceable. It has appeared to me to have more power over the cancerous diseases of persons advanced in years than of those who are not aged. Four or five grains of this extract may be made into a pill with a little powder of hemlock, and taken three or four times a day. After a short time, the dose may be increased to two, or even three pills, thrice daily.

The juice of clivers, taken internally, is said to have been useful in several instances, in removing suspicious enlargements in various parts, and improving the condition of the general health. The compound decoction of sarsaparilla is also often a good medicine, both in ulcerated and unbroken cancer, and it may be taken together with any of the pills above prescribed.

There is reason to consider arsenic a medicine of some value in many cases of cancer, whether in a state of tumour, or open sore. It improves the discharge from open cancer, retards the progress when unbroken, and, in some instances, has dispersed

the disease completely. The patient may begin with three drops of the arsenical solution, twice or thrice a day, in barley-water, and gradually increase it to six or eight drops; but it is so active a remedy that it will require great caution in its exhibition.—See *Arsenic*, page 4.

The best treatment in ulcerated cancer, consists in administering those medicines which have the power of invigorating and amending the state of the general habit, and in applying to the ulcer, articles which are capable of stimulating the sound parts to throw off those that are diseased, and of so altering the diseased condition of action in the vessels of the sounder parts that they may heal. The internal remedies are, therefore, the same as above described for unbroken cancer. The most powerful local applications are arsenic, arseniate of iron, carbonate, phosphate, or oxy-phosphate of iron, hydriodate of potash, and poultices of mallow leaves, figs, or bread and water.

Take of crow's foot, dog's fennel, fresh gathered, of each, an ounce; white arsenic, a drachm; flowers of sulphur, five scruples. Bruise the crow's foot and dog's fennel together, then add the other ingredients, and beat the whole into a paste; then form this into balls, and dry it in the sun.

When used, they are to be powdered, a sufficient quantity mixed with the yolk of an egg, and applied, on a piece of bladder, to the ulcer. In this state the caustic is to remain, till the part which it destroys separates spontaneously; when another plaster may be applied in the same way, till it separates its portion, and so on till the whole of the diseased surface is brought away, when a common healing salve, as No. 94, or 95, page 118, may be used. This is the once famous Plunkett's powder. I am inclined to think it is not without efficacy in some cases, but its great activity requires it to be used with much caution.

The arseniate of iron, however, is a milder and more manageable remedy, and perhaps equally efficacious, or more so. A scruple may be mixed with the white of an egg, and applied to the ulcer by means of a camel's hair pencil, and renewed when the slough separates.

Or the ulceration may be dressed twice a day with carbonate or oxy-phosphate of iron, mixed with a little water, or white of egg. In many cases these are of great advantage.

Whatever powder is made use of, occasional poultices, to bring away the discharge and separated portions of the ulcer, are proper and beneficial.

The hydriodate of potash has great effect in mitigating pain, and improving the discharge of cancerous ulcers. Half a drachm may be mixed with an ounce of simple syrup, and a little of this solution laid over the whole ulcer, twice a day.

Patients afflicted with the present disease are often obliged to have recourse to opium in some form. The best preparations of opium, in such cases, are *Battley's solution of opium* and *the muriate* or *acetate of morphia.* They are exceedingly valuable in relieving pain, and in regard to the dose proper in such cases see the remarks at page 56.

The diet, in all cases of cancer, should be mild and nourishing. A little animal food should be taken once a day, with eggs, and other light nutritious food. A little mild malt liquor, or white wine, will also be proper in most cases. Some professional men have advised a low diet in this disease; but, in my opinion, it is extremely injurious. Sir Astley Cooper protests strongly against it.

Change of air and scene, with daily exercise, proportioned to the strength, is always advisable.

An operation for the removal of ulcerated cancer in the breast is now never performed by men of judgment, and very rarely recommended by them in scirrhus, or unbroken cancer, except in the earliest stage, and before the occurrence of lancinating pain. After the commencement of pain, the use of the knife serves only to aggravate the patient's suffering, and accelerate her death. Persons at a distance from London will do well to note this, as it is no uncommon thing for a quite different advice to be given in the country, to the great injury and distress of the sufferer. Indeed, I am much disposed to question whether an operation ever succeeds in real cancer of the breast, except in the *very earliest* stage, in elderly people. Even then success is seldom witnessed. This opinion is given as the result of close attention for several years to the progress of cases in which an operation has been performed.

The subject of cancer in the womb is separately considered in the author's *Treatise on the Diseases of Females.* He has there also considered the different tumours of the breast and womb which simulate cancer.

OF CARBUNCLE.

A carbuncle is a broad, flat, firm, burning tumour, in which the cellular structure takes on a sloughy or gangrenous state. It is so denominated from the redness and fiery heat of the inflammation. The first appearance it assumes is similar to a boil, and of a bluish colour, rising a little above the skin, having within it commonly a bloody serum.

It occurs mostly in elderly people, and in weakly, depraved habits; and we frequently meet with it in those who have debilitated their frames by an excess of good living.

It can be distinguished from other swellings by pressure, which causes a discharge in several parts of its surface.

TREATMENT. As the carbuncle easily assumes a gangrenous or mortified aspect, the same treatment will be necessary as in gangrene. Warm, aromatic fomentations, as No. 52, page 109, and emollient poultices of linseed meal and oil, are to be made use of. Stimulating lotions are likewise proper, and one of the following may be employed with advantage:

Take of spirit of turpentine, olive oil, of each, three ounces.—Mix for a lotion.

Take of tincture of muriate of iron, one or two ounces; water, fourteen ounces.—Mix.

One of these is to be applied by laying over the tumour soft rags moistened with the lotion, and renewing them frequently.

A free incision should be made early through the whole length of the tumour, and as much of the contents be squeezed out as can possibly be done without giving great pain.

The constitutional treatment will consist in the exhibition of bark, aromatic confection, opium, &c. as recommended for mortification; allowing a generous and nourishing diet, proportionate to the severity of the symptoms. The food should, however, be such as is very easy of digestion. Porter, and wine, are very proper. See *Mortification.*

Take of Peruvian bark, fifteen grains, or of sulphate of quinine, two grains, or more; tincture of bark, two drachms; tincture of opium, five drops, or more; aromatic confection, ten grains; decoction of bark, an ounce and a half.—Mix for a draught, to be taken three or four times a day.

A pill, composed of from half a grain to a grain of opium, with two or three grains of James's powder, and half a grain of calomel, is a very useful night pill.

OF CATALEPSY, OR TRANCE.

Catalepsy is a total suspension of sensibility and voluntary motion, and, for the most part, of mental power, the pulsation and breathing continuing, the muscles being flexible, and the body yielding to, and retaining any given position.

The complaint is rare, and many of its symptoms so singular, that some physicians, who have never witnessed an example of it, are disposed to regard it in every case as an imposture; but there is now no doubt of its being a real disease.

A highly nervous or irritable temperament is the chief predisposing cause; and the disease is capable of being excited by terror, or other violent emotions of the mind, and by various

corporeal irritations, particularly those of the stomach, suppressed menstruation, repelled chronic eruptions, and plethora.

TREATMENT. If it arise from plethora, or some obstruction or irritation in the stomach, a moderate bleeding, with purging, will probably be the most effectual means of relief; but it is commonly a disease of nervous debility, when there is a necessary disturbance of the balance of the nervous system, and stimulants will usually be found far more appropriate and serviceable, particularly in the form of blisters to the head and breast, or between the shoulders, mustard poultices, and other rubefacients, see No. 46, page 107, to the extremities, and injections into the rectum. The body in the mean while should be kept warm, with a free influx of pure air, general friction may be often had recourse to, and a little brandy, ether, or ammonia may be introduced in the stomach if possible.

After the paroxysm is over, the patient should enter upon, and steadily pursue, a plan for invigorating the whole constitution, and the metallic tonics, as No. 102, or 103, page 121, or the stomachic pills, No. 104, or quinine, with change of air and scene, will be found some of the most powerful means of effecting this object. An entire change of air is usually very serviceable.

OF CATARACT.

The cataract is an opaque state of the *crystalline lens*, by which the rays of light are obstructed in their passage to the retina, or expansion of the optic nerve on the bottom of the eye. There are three kinds of cataract, the lenticular, in which the opacity exists in the lens itself, and is confined to it; the capsular, where the opacity is confined to the capsule, or membrane of the lens; and the complicated, in which it is common to the lens and its capsule.

At the commencement, there is an indistinctness of vision, as if a cloud hung over the eyes, or the objects were enveloped in a mist; there is the sensation of a mote floating before the eye; it being, for the most part, a single mote and stationary; and the patient sees better in a weak than in a strong light. In the progress of the disease, an opacity becomes sensible, and gradually increases, until nearly a total loss of vision is produced; the crystalline lens by degrees changes from a state of transparency to a perfect white or grey colour; in some rare instances, it has been black, and also red; and in appearance resembles a pearl, or other extraneous body of a like colour, situated immediately behind the pupil.

It frequently originates from *causes* we cannot trace; but it has often followed upon convulsions, chronic head-ache, syphilis,

rheumatism, suppressed perspiration, and protracted inflammation of the eye. It is most commonly met with after forty. If it suddenly forms from a severe injury, the lens frequently recovers its transparency without any operation being necessary.

TREATMENT. The power of medicine is generally very limited in this complaint, and the patient is, therefore, in the majority of instances, obliged to submit to a surgical operation for the recovery of sight. Yet recoveries have been witnessed after the employment of suitable remedial measures, and it is a question whether they would not often occur, if more hope of success were commonly cherished by professional men. However this may be, a fair trial should in all cases be given to medical treatment, before resorting to an operation.

Perhaps the most powerful remedy here is the oxymuriate of mercury.

> Take of oxymuriate of mercury, two grains; distilled water, three ounces; rectified spirit of wine, three drachms.—Mix.

The dose of this mixture is thirty drops, twice or thrice a day, in water, gradually increased to a tea-spoonful. It is best taken on a full stomach, and when there is considerable general weakness, it may be advantageously combined with a drachm, or two, of compound tincture of bark, at each dose.

The alterative pill, No. 98, page 119, has likewise been of service. And whether this, or the oxymuriate, be tried, the compound extract or decoction of sarsaparilla, will occasionally be found a valuable adjunct, especially when there is a deranged state of the general health, or signs of scrophula in the constitution.

The above remedies will be particularly indicated, if long-continued indolent inflammation has existed in the eyes.

Henbane has been highly extolled. From five to ten grains, or more, of the extract, *(prepared in vacuo)* may be taken, two or three times a day, either alone, made into a pill, or with a small quantity of calomel, say, two or three grains to a drachm of the extract of henbane.

Electricity, in the form of aura, or weak sparks, has been recommended. Mr. Ware, the well known oculist, used to advise a drop or two of ether, to be dropped into the eye, once or twice a day, occasionally rubbing the eye, over the lid, with the point of the finger dipped in mercurial liniment.

There is on record a remarkable instance of cataract which was dispersed by gentle and persevering friction over the eye, the lid being closed. It occurred in the person of Admiral Henry, of Rolvenden, in Kent, who was himself the operator, and has published his own case in a shilling pamphlet.

When it is necessary to have recourse to the needle to remove the cataract from the axis of vision, it may be done by three different operations, each of which has its advocates. The first is by *extraction*, or the removal of the lens, by a semicircular incision made through the transparent cornea: the second is that of *couching* or *depression* of the lens, into the vitreous humour: the third is by *puncturing the capsule* of the lens, so as to allow of the discharge of this crystalline body into the anterior chamber of the eye. Mr. Ware, and Baron Wenzel, were attached to the first; Mr. Hey, of Leeds, and the distinguished Scarpa, practised the second; and Mr. Saunders, of the Eye Infirmary, adopted the last. Mr. Green considers Mr. Saunders's operation "greatly preferable to any other, in those cases which admit of it."—*Lancet, vol.* 1, *page* 618. 1823-24. Mr. Tyrrell appears to prefer the operation of depression.—*Lancet, vol.* 2, *page* 472. 1823-24. Each operation is supported and practised by men of great eminence, and it is extremely difficult to say which is the best. The operation of extraction is much more difficult and complicated than that of couching, and is more liable to be thwarted of success by subsequent inflammation;* but if it succeed, the recovery of sight is usually more perfect. The operation of puncturing the capsule is as simple as that of couching, and does not expose the patient to a repetition as the latter does. We may also remark, that if couching should not succeed in the first instance, it may be often repeated; whereas in the mode by extraction, if a cure be not accomplished in the first instance, the eye will be inevitably lost. It is reasonable, however, to suppose, that neither extraction, depression, or puncturing the capsule, is alike adapted to every case of cataract; but that the mode of operating ought always to be suited to the exigencies of the particular case. This is a point which has been too much overlooked by oculists. Beer, a very able and scientific German surgeon, whose treatise on diseases of the eyes has attracted great attention in this country, ridicules the idea of adhering exclusively to any one plan of operating; and whenever the question is put to him, what is his own plan? he answers, that his custom is to operate in the manner which appears to him to be the best adapted to each particular case about which he is consulted.

We have been adverting above to the necessity for operating when both eyes are affected with this disease, but sometimes only one eye is affected, and the other is sound; but respecting the question, whether an operation ought to be done in this

* Wenzel used to say, that a man must poke out a hatful of eyes before he can hope to perform extraction with success.

latter case, a difference of opinion prevails, though the majority of surgeons seem to answer in the affirmative. When there is a full-formed cataract in one eye, and vision is retained in the other, Mr. Travers thinks the postponement of the operation wrong. "I am satisfied," says he, "that the cataractous eye, if it becomes the subject of an accidental inflammation, is strongly disposed to go into amaurosis, and, further, that the retina* loses its vigour by the permanent exclusion of light. I speak from repeated observation of the fact." On the contrary, Mr. Lawrence is averse from operating under these circumstances.

The late Mr. Saunders was very successful in operating upon the eyes of infants and very young children, afflicted with cataract. His greatest success attended the operation between the ages of eighteen months and four years.

OF CATARRH, OR A COLD.

Catarrh, or, as it is denominated in common language, a cold in the head or chest, is a slight inflammation of the membrane lining the back part of the mouth, and extending to the terminations of the windpipe, (called bronchia,) and the nose, being attended with a stuffing of the nostrils, sneezing, and, for the most part, a mucous expectoration, or discharge from the nose.

Its symptoms are well known to be feverishness; weight and pain in the head; oppression of the chest, and impeded respiration; sense of fulness and stopping of the nose; watery inflamed eyes; cold shiverings, succeeded by transient flushes of heat; soreness of the fauces and windpipe; cough; pains in the chest; and increased secretion of mucus from the parts affected.

There are *two species* of this complaint, *common catarrh*, or *cold;* and the *epidemic catarrh*, or *influenza*. The usual cause of the first, is cold applied to the body; of the second, contagion.

The epidemic catarrh, or influenza, differs from common cold in the suddenness of its attack, the severity of its symptoms, and very generally in the rapidity of its transition, as well as in the nature of its cause. The middle aged, the strong, and the robust, are the soonest affected by it, and suffer most severely, while the young and the old are less susceptible of its influence. The fever is often strikingly depressive. Indeed the influenza may be considered as a catarrhal fever, accom-

* The expansion of the optic nerve on the bottom of the eye.

panied with, and followed by, extraordinary depression of the nervous energy for several weeks after the fever has ceased.

TREATMENT. *In the common cold*, a little domestic repose in a very moderately warm atmosphere, diluting drinks, of a temperature not higher than lukewarm, and abstinence from animal food and fermented liquors, with a sudorific posset of treacle and milk, or some warm gruel, at night, is usually sufficient to carry off the complaint. If the cold be rather severe, four grains of James's powder alone, or combined with half a grain of calomel, taken at bed-time, is a useful remedy; and a little aperient medicine, as No. 73, or 74, page 114, should be taken in the morning. If the cough be troublesome at night, four grains of compound powder of ipecacuanha, taken on going to bed, will be found of great service. Should the catarrh be of a severer description, with great oppression of the chest, and considerable fever, it may be necessary to let blood to the extent of six or eight ounces, and to give an active purgative directly, as No. 27, page 103, the foregoing means being likewise resorted to.

I do not think it a correct practice, after a cold is caught, to make the room the person sits in much warmer than usual, to increase the quantity of bed-clothes, wrap up in flannel, and drink a large quantity of hot tea, gruel, or other slop, because it will inevitably increase the feverishness present, and, in the majority of instances, prolong rather than lessen the duration of the cold. It is well known that confining inoculated persons in warm rooms, will make their small-pox more violent, by augmenting the general heat and fever, and it is for the same reason that a similar practice, in the present complaint, is attended with analogous results, a cold being in reality a slight fever. Indeed, some professional men recommend a reduced atmosphere, and frequent draughts of cold fluids, as the most efficacious remedies for a recent cold, and when the patient's habit is full and plethoric, I believe it will be found the best treatment, at least in the commencement. In some parts of England, among the lower order of the people, a large glass of cold spring water, taken going to bed, is found to be a successful remedy.

A cold is so common a complaint in our variable climate, and becomes so frequently the parent of more formidable maladies, that the subject of *prevention* is one of considerable moment, and I shall consequently make a few observations respecting it, which, if attended to, cannot fail to be extremely useful to all persons, and more particularly to those who are liable to suffer severely from this disorder.

Colds are sometimes produced in the following manner:—

when a person in cold weather goes into the open air, every time he draws in his breath the cold air passes through his nostrils and windpipe into the lungs, and, consequently, diminishes the heat of these parts. As long as the person continues in the cold air, he feels no bad effects from it; but as soon as he returns home, he approaches the fire to warm himself, and very often takes some warm and comfortable drink *to keep out the cold*, as it is said. The inevitable consequence is, that he will first perceive a glow within his nostrils, and breast, as well as over the whole surface of the body. Soon afterwards, a disagreeable dryness and huskiness will be felt in the nostrils and breast. By and by, a short, dry, tickling cough comes on. He feels a shivering, which makes him draw nearer to the fire, but all to no purpose; the more he tries to heat himself the more he becomes chilled. All the mischief is here caused by the violent action of the heat.

Such being a frequent cause of cold, the following rules for avoiding the complaint may be adopted with great advantage.

When you come out of a very cold atmosphere, you should not at first go into a room that has a fire in it, or, if you cannot avoid that, you should keep for a considerable time at as great a distance as possible, and, above all, refrain from taking warm or strong liquors when you are cold. This rule is founded upon the same principle as the treatment of any part of the body when frost-bitten. If it were brought to the fire, it would soon mortify, whereas, if rubbed with snow, no bad consequences follow from it. Hence, if the following rule were strictly observed, *when the whole body, or any part of it is chilled, bring it to its natural feeling and warmth by degrees*, the frequent colds we experience in winter, would, in a great measure, be prevented.

Some persons labour under what seems like a cold in the head for weeks or months, but this is merely a symptom of general derangement of the system, and must be treated accordingly.—See *Chronic Disease in General.*

In the influenza, bleeding is rarely required, notwithstanding the violence with which the disease often makes its assault, and from the debility so soon induced, should be avoided. If urgent pleuritic pains are present, it will be best to trust to local blood-letting by leeches, or cupping. The most successful treatment consists in repose, diluting drinks, and the employment of the usual means, above noticed, to obtain and preserve a gentle perspiration, the bowels being kept free from confinement. If the chest be much oppressed, an emetic will afford the best relief; and if the cough be troublesome, and the breathing laborious, the following will be found useful:—

Take of ipecacuanha in powder, four grains; oxymel of squills, two drachms; sweet spirit of nitre, one drachm; spearmint water, two ounces and a half; syrup of orange peel, one drachm and a half.—Mix, and take a table-spoonful four or five times in the twenty-four hours.

Unless the inflammatory symptoms run very high, the diet should be nourishing throughout, though mild.

In 1833, an epidemic influenza raged throughout Europe, and it is supposed that in most of the largest cities in this quarter of the globe, almost one-half of the inhabitants were attacked by it. Blood-letting and all depletory measures were found hurtful.

The influenza frequently leaves behind a good deal of weakness, and a troublesome cough. The debility is to be removed by a free use of Peruvian bark, gentle exercise, change of air, cold bathing, and a nutritious diet. For the cough, No. 76, page 114, or No. 49, page 107, and such like, will be found the most beneficial.

Some of the most intractable diseases originate in neglected colds, and it is, therefore, highly necessary, that this complaint should at all times be attended to, and removed as quickly as possible. In addition to what is said above, I would remark, it is a vulgar saying, "feed a cold, and starve a fever," but it is not correct: the proper treatment has been pointed out. The weakly and delicate, who are subject to frequent colds, should endeavour by diet, regimen, and medicine, to invigorate the general habit, remembering that the most effectual way for guarding against cold, is by rendering themselves superior to its influence; which most people may do by constant exposure to the air, with active exercise, and avoiding enervating indulgences within doors. It is a very pernicious practice to sleep and dress in a room that has a fire in it, even in winter. The smoke, dust, and heat arising from burning fuel in a bed-room, are highly injurious to health, more especially to the health of the weakly.

Strong and robust persons, liable to frequent colds, will find temperance, plenty of cold water, and attention to the preceding rules, a certain preventive. To all, the daily use of the flesh-brush to the throat, neck, and breast, and sponging the whole body with cold or tepid water every morning on first getting out of bed, will prove of great service in rendering the parts less susceptible to the action of cold. These are means highly deserving of the confidence and attention of the delicate who are much troubled with colds and hoarseness. Sir Astley Cooper attributes his freedom from colds, in a great measure, to the constant practice of sponging the body daily. He remarks,

"The methods by which I preserve my own health, are temperance, early rising, and sponging the body every morning with cold water, immediately after getting out of bed, a practice which I have adopted for thirty years; and though I go from the hot theatre into the squares of the Hospital, in the severest winter nights, with merely silk stockings on my legs, yet I scarcely ever have a cold. Should it happen that I feel indisposed, my never-failing remedy is one grain of calomel combined with four grains of cathartic extract, which I take at night; with a bason of hot tea about two hours before I rise the following morning, in order to excite a free perspiration, and my indisposition soon subsides."—*Surgical Lectures, No. IV.*

Dr. Heberden says, that a patient of his was cured of an habitual cold in the head whilst taking a full dose of Peruvian bark, two or three times a day, for the relief of some other complaint.

OF CHICKEN-POX.

In the chicken-pox, after slight symptoms of fever, as lassitude, loss of sleep, wandering pains, loss of appetite, &c. an eruption appears; first on the back, consisting of small reddish pimples, much resembling the first appearance of small-pox. On the *second* day, the red pimples become small vesicles, containing a colourless fluid, and sometimes a yellowish transparent liquor. On the *third*, the vesicles arrive at their full maturity, and, in some instances, very much resemble the genuine small-pox. Soon after, the fluid escapes from the tender vesicle, and a thin scab is formed at the top of the pock, without pus ever being formed, as in the true small-pox. Generally before the *fifth* day the whole eruption disappears, and no cicatrix or mark is left behind.

It is entirely free from danger, unless the eruption be of the confluent kind, that is, the pimples being numerous and running into each other, when the danger is to be appreciated from the degree of violence of the concomitant fever.

It is sufficiently *distinguished* from the small-pox by its fluid, except in a few anomalous cases, being limpid throughout; and by its concreting into crust as early as the third or fourth day from the eruption: while in small-pox the fluid consists of pus (thick matter) as soon as formed, and does not concrete into crusts till the seventh day, and often much later.

The chicken-pox vesicle is full of watery serum on the top, on the *first day* of the eruption,—a distinctive mark from small-pox. Dr. Willan has well described another characteristic circumstance—That small-pox *pustules* are, on the first and second day, small, *hard*, globular, red, and painful; imparting the sensation when the finger is pressed over them, similar to

that which one might conceive would be excited by the pressure of small round seeds under the skin; while in chicken-pox, almost every *vesicle* has, on the the first day, a hard inflamed *margin;* but the sensation communicated to the finger is like that from a round seed flattened by pressure.

TREATMENT. In the ordinary course of this complaint, the symptoms are so slight as not to require the aid of medicine. Gentle purges are all that are in general necessary. If the shivering, sickness, head-ache, and pains in the limbs, are severe, an active purge, as No. 27, page 103, should be administered, succeeded by some diluting drink; and the patient should be confined to a quiet, spacious, and well ventilated room, with a cool dress, till the febrile symptoms have left him.

OF CHILBLAINS.

The chilblain is a painful inflammatory swelling, of a florid, deep purple, or leaden colour, appearing in the fingers, toes, heels, and other extreme parts of the body. The pain is sometimes intermitting and pungent, but the patient is more frequently annoyed by an obstinate itching, and sense of tingling. The part often swells, and ulceration not unfrequently follows; in which case a simple separation of the skin is first observed, and below this there appears a foul, irregular, painful ulcer.

It is most frequently found in children, and older persons of relaxed fibres; and the common exciting cause is exposure to severe degrees of cold.

TREATMENT. A stimulant mode of treatment is the only one that will answer.

In the inflamed unbroken state, the topical application of a stimulating liniment, or lotion, is generally sufficient for a cure, if it be used early, and with perseverance, the part being defended, at the same time, from the severity of the external air. The liniments, No. 41, 45, and 46, page 106, are the most efficacious. The lotion, No. 68, page 113, is also useful. Sir Astley Cooper is said to be partial to the following liniment, which I think an admirable application.

Take of camphorated spirit of wine, one ounce; Goulard's extract, (pure), half an ounce.—Mix, and apply to the part.

In the ulcerated state, warm and irritating dressings will alone succeed in effecting a cure. Let the ulcer be dressed night and morning with one of the ointments, No. 94, 95, or 96, at page 118. If fungus flesh should appear, apply the citrine, or white precipitate ointment, as No. 89, page 117, till it has been removed, then dress with one of the former ointments till well.

The following application is much esteemed in the ulcerated state.

Take of honey, common turpentine, of each, four ounces.—Mix these together, and then stir in a sufficient quantity of the finest wheat flour to give it the consistency of a cerate. Dress the part with it twice daily, in the usual way.

Many persons subject to chilblains might prevent their occurrence, or very much lessen their severity, if, upon the approach of winter, they were to defend the parts from external cold, by wearing leather socks, or a warm diachylon or Burgundy pitch plaster, spread upon leather. Daily friction with the flesh brush should also be resorted to, and the liniment, No. 45, be occasionally rubbed in, which will harden the skin, and effectually promote the circulation of the parts.

No person troubled with chilblains ought ever to allow the employment of any means which tend to weaken either the part affected, or the general system. Sometimes the chilblains will swell to a considerable size, and appear very red and inflamed, but this inflammation is dependent on weakness, and will never fail to be much increased by poultices, confinement, and every other measure that has not the effect of giving tone and strength to the local and general circulation. Under these circumstances I should order the patient a little quinine thrice daily.

OF CHOLERA MORBUS.

By cholera is meant a vomiting and purging, which is often of an alarming character, especially in hot climates. This disease has been generally considered to be an inordinate secretion of bile of a vitiated quality; but it is now certain, that those are the most alarming cases, in which the secretion of bile is wholly suppressed. It appears to me, that a peculiar and intense irritation or excitement of the internal membrane of the stomach and small intestines, has much more to do in producing this complaint, than any diseased affection of the liver, gall ducts, or any other organ.

The most frequent *symptoms* are nausea, pain and distension of the stomach and intestines; quickly succeeded by violent and frequent vomiting, and painful purging of thin and watery, or bilious, or other ill-conditioned fluids; agony of the intestines and abdomen; distressing thirst and heat, followed by cold sweats; a quick, small, and sometimes unequal pulse; great anxiety and extreme restlessness; excruciating spasms of the legs, arms, chest, and abdomen; fainting; sometimes universal convulsions.

The attack of this complaint is generally sudden. In this

country, the bowels are seized with griping pains, and the stools, which are at first thin and watery, as in common looseness, are passed frequently; then the stomach is attacked with sickness, discharges its contents, and rejects what is swallowed. In the course of a few hours, the matter vomited, as well as that discharged by stool, appears to be of a very bilious nature, and passes off both ways in considerable quantities. The griping pains in the intestines and stomach now become more severe, and are accompanied with spasmodic contractions both in the bowels and limbs.

In India also the disease commences nearly in the same manner, but there it often attacks with extreme violence, and proceeds with frightful rapidity. In Ceylon, where it often appears in its most concentrated state, it is frequently called *Mort de Chien*, which is nothing more than cholera appearing in its worst form.

The *essential* manifestations of *malignant* cholera, are collapsed countenance, blue lips and nails, shrunken fingers, the total failure of the usual secretions, deficient animal heat, suspension of the pulse, and stagnation of the venous circulation. We see from this statement that vomiting and purging may be absent.

The most dangerous signs in the ordinary progress of the disease, are a coldness of the surface of the body, extending over the region of the heart and stomach; the skin under the nails becoming incurvated; the tongue icy cold; an universal colliquative sweat breaking forth, with a shrivelling of the palms of the hands and soles of the feet; an absence of vomiting and purging. The violence of the attack may destroy life in three, six, twelve, or twenty-four hours, or less, but this is not a frequent occurrence in Great Britain.*

* In regard to the epidemic cholera lately raging on the Continent of Europe it should be observed, that vomiting and purging were often amongst the least important symptoms, though the appearance of the fluid evacuated was highly characteristic. Rice-water strained, and allowed to settle down is, when shaken up, the best type. The evacuations, both upwards and downwards, either soon ceased, or were easily repressed, while in many cases, and these the very worst, there were either none, or they were very trifling. It was the sudden paralysis and rapidly diminishing action of the heart, of the arteries, and of the organs of respiration, with the thickening of the blood, the loss of the power to generate heat, that constituted the real danger of the first—the most fatal stage of the disease. Blue, black, flat lines marked the course of the larger veins; a deadly livor coloured the skin: Even the tongue was icy cold; the respiration short, quick, and imperfect; the pit of the stomach and midriff drawn violently upwards and inwards; the pulse and voice extinct; the limbs and belly torn with spasms; the hands and feet shrivelled, corrugated, and much diminished in volume; the reason unimpaired. It would seem as if all the colourless cells and vessels, upon which the plumpness of the integuments so much depends, were squeezed to emptiness, and nothing left but the thickened colouring matter of the blood. If this state was not overcome in a very few hours, the sufferer died.

Physicians who have seen the disease in Russia and elsewhere state, that the shrivelling of the fingers and toes, the colour of the skin, the shrinking of the features, the coldness of the tongue, the feebleness or extinction of the pulse and voice, the

This disease is most frequently *caused* in our own country, by suppressed perspiration, particularly by cold or damp applied to the feet; cold indigestible fruit, as unripe apples, cucumbers, melons, &c.; violent purgatives; sudden fright: and it prevails most at the close of summer, and the beginning of autumn.

But it is to India that we are to look for cholera in its most exquisite forms, where it is frequently epidemic, and from its malignant character, often frightfully destructive of human life. The remote cause of the epidemic cholera of India and Russia seems to be a peculiar state of the atmosphere, and a specific contagion. Very many medical men do not at all admit its contagious nature, but the facts in proof of this are so many and so strong that many have changed their opinion, (and the present author is one of these,) and consider it as decidedly contagious under favorable circumstances.

In respect to the causes which predispose to, or excite the disease in India, the most able practitioners agree, that they are rapid atmospherical vicissitudes, in regard either to temperature or moisture; exposure of the body to currents of cold air, particularly the chill of the evening, after being heated by violent exercise of any kind, inducing debility or exhaustion; low marshy situations; flatulent or indigestible food, especially crude and watery vegetables, which compose a large proportion of the diet of the natives; and particularly that gradual undermining of the constitution, which arises in a condensed, dirty, and ill-fed mass of population.

It has been usual with medical writers to consider severe affection of the liver, or of the bile ducts, to be the immediate cause of cholera, (in other words, in what the disease essentially consists,) but the present author is convinced, that it is really owing to high irritation and spasm of the stomach and small intestines, for nothing can explain the severity of the symp-

rice-water evacuations when present, were the true marks of the disease not to be mistaken.

Dr. Barry says, "It is in the above state, particularly if there be violent spasm, that the *magisterium bismuthi* (*subnitrate of bismuth*) has been found so serviceable, assisted by cordials, and synapisms covering the whole belly, and frictions. Neither warm baths nor vapour baths will do. The body is warmed by them, as a dead animal would be, but the faculty of generating heat not being restored, the patient cools down rapidly again, and with increased debility. Calomel they have never ventured to give; and opium appears really to be contra-indicated, unless to allay vomiting and spasm, which the bismuth effects much better." The dose of subnitrate of bismuth is from three to six or eight grains, or even more.

It is reported that "in the ordinary way of treating the disease—suppose the first state safely past—very rarely indeed, not five times in the hundred, does the patient return to health without passing through a dangerous fever, which not unfrequently assumes a typhoid character, with reddish-brown dry tongue; stupor; suffused eye; constipated and tender belly; dark sordes about the lips and teeth. The pulse, however, is generally quicker, and the skin hotter, than in primitive typhus. In this state many die from the fourth to the seventh day, and even later. In other cases the fever is benignant, and goes off within the fourth day by copious perspiration."

toms in this disease, the extensive chain of influence excited, and the complete exhaustion of the living principle, which sometimes occurs with astonishing rapidity, but the supposition of such a condition of these very sensible and important organs. The imperfect organization of the liver, and bile ducts, their dull sensibility, and their confined sympathies, are so apparent, as to render it impossible for us satisfactorily to account for these phenomena by any imagined spasm centered in them.

When the vomiting and purging are absent, it is *distinguished* from colic by symptoms of intense anxiety, the spasms of the extremities, and other essential manifestations mentioned in the preceding page.

Treatment. In the slighter cases of cholera, the proper treatment consists in freely administering mild diluting drinks, as weak chicken broth, barley-water, toast-water, made with thoroughly toasted bread, and the like. Dr. Douglas strongly recommends toast-water made with toasted oat-bread boiled in the water, which he declares that he never knew rejected. These may likewise be exhibited by the rectum. After the stomach and bowels are thus cleared, the saline mixture in the act of effervescence should be given, (see No. 74, page 99); and repeated doses of laudanum must follow, to subdue the spasmodic action. Forty or fifty drops of laudanum, or more, may be given every hour, in the saline effervescing draught, or in spearmint water; or a grain and a half of opium be exhibited in a pill, with, or without, three or four grains of antimonial powder. Solid opium generally suits best in all cases of cholera. A grain of calomel, combined with a grain of opium, is a powerful remedy, and may be given every two hours, or oftener, till the symptoms subside. When the patient can retain nothing swallowed, opium should be rubbed into the pit of the stomach. See No. 39, page 105.

Dr. W. Ainslie has very highly extolled the efficacy of magnesia in cholera. Two drachms and a half, or three drachms, of sub-carbonate of magnesia, may be given in water, and repeated two or three times, if necessary. I think this may prove a very valuable remedy in the milder cases of cholera occurring in Great Britain, but we ought not to trust to it in malignant cholera.

In the cholera of India, however, and even in the severer description of cases in our own country, a more decisive and active plan of treatment is always necessary. In Indian cholera the plan pursued with most success, consists in bleeding from the arm to the extent of sixteen or twenty-four ounces, according to the strength of the patient, and immediately afterwards

administering calomel with opium, in very free doses of from fifteen to twenty grains of the former, in a dose, with one or two grains of opium, or fifty or sixty drops of laudanum, and a scruple of columba powder, which is to be repeated, if necessary, every one, two, or three hours, till the urgency of the symptoms subsides. To these should be added a liberal use of the most diffusible stimuli, as the sweet spirit of nitre, carbonate of ammonia, (No. 79, page 115,) camphor, hot arrack and water, mixed with camphor mixture, or warm punch. The hot air or vapour bath is also necessary, and stimulating embrocations to the abdomen and limbs, or frictions with hot flannels. See No. 41, or 46, page 106. In short, every means must be tried to determine to the surface of the body, and restore a natural, warm perspiration.

The mode of treating this malady stated in the preceding paragraph is well approved, but as the following presents some additional points, and is given by Dr. James Johnson, who had many opportunities of treating Indian cholera, I have much pleasure in inserting it in the present edition of this volume. Dr. Johnson says, (*Med. Chirurg. Rev. October*, 1831,) "We have often been asked, what we ourselves would do, in the event of meeting with a case of the malignant cholera," as now appearing on the continent of Europe. "The following contains the treatment which we would wish to be pursued in our own case."

"The first step which we would advise, would be the placing the patient in a warm bed, where he is to be chafed with hot flannels all over the body, while a hot bath is preparing. The flannels might be impregnated with ardent spirits, and hot water, as soon as procured, substituted for the dry flannel. Meantime, we would administer three grains of opium and ten grains of calomel instantly, followed by moderate potations of warm brandy and water, while the skin is cold, and the circulation concentrated about the internal organs. We would be inclined to repeat three grains of calomel and one of opium every two or three hours, till re-action took place, and the tide of the circulation flowed to the surface. As soon as the bath was ready, we would place the patient in it, having put a good allowance of salt and mustard in the water. If by these means heat be restored on the skin, and the spasms and vomiting be allayed, the great danger is over, and the management of the feverish re-action requires but very moderate skill. The injection of fifty or one hundred drops of Battley's sedative, or common laudanum, in a small quantity of starch or gruel, into the rectum, might be beneficial. These, we conceive, are the main indications of treatment; and, if they fail, we apprehend that most of the complicated machinery of practical medicine, recommended by some, more from speculation than experience, will be found to share the same fate."

When all medicines by the mouth have been ineffectual, in allaying the irritability of the stomach and bowels, a hundred or a hundred and twenty drops of laudanum, should be given

in an injection, mixed with warm starch or gruel. This has sometimes been successful.

The application of *dry* heat is, on the whole, much to be preferred to any other method of communicating heat to the body in cholera. For this purpose dry salt or sand may be placed in a pan over the fire, and heated as hot as the skin will bear it, then put into pillow cases, or shirts tied at the ends; the cases should not be full, in order that they might be very pliant, and readily applied to every part of the surface.

A writer on the epidemic cholera of India, reports the effects of a fortunate blunder, in one instance, in the following terms: "By mistake, twenty grains of calomel and sixty minims" (equal to one hundred and twenty drops) "of laudanum, were given at an interval of less than half an hour. The patient was inclined to sleep; nothing more was done; and in two hours and a half he was as well as ever he was in his life."

The following directions for the cure of cholera, I regard as excellent. They were much approved by the Madras Medical Board, and are easy to be understood and practised. Give the patient the following draught:

Tincture of opium, sulphuric ether, of each, one drachm; brandy or arrack, half an ounce; water, one ounce.—Mix.

If this be vomited, let it be repeated, every time, in ten minutes after the vomiting.* In half an hour after the vomiting has ceased, give a bolus of this prescription:

Calomel, twelve grains; camphor, three grains; opium, one grain; oil of peppermint, three drops,—Make into a bolus.

If this bolus be vomited, it must be repeated in a similar manner each time, half an hour after the vomiting has ceased.

If the vomiting be violent, give an injection of one drachm and a half of laudanum in four ounces of barley-water: and let it be repeated as often as it is rejected. Half the quantity of this injection should also be administered after every liquid stool.

When no vomiting occurs at all, give the following draught and a bolus.

Tincture of opium, sulphuric ether, of each, half a drachm; ipecacuanha wine, half an ounce; water, two ounces.—Mix for a draught.

Calomel, twelve grains; extract of jalap, four grains; camphor, three grains; opium, one grain; oil of peppermint, two drops.—Make into a bolus.

If these produce no effect, repeat the draught after every forty minutes.

* In case of vomiting, I think the addition of a scruple or half a drachm of columba powder an excellent practice. It often most materially assists in allaying vomiting.

In all cases rub the arms and legs with hot sand, and apply a blister or mustard poultice over the stomach, *immediately* after the first dose of medicine is given.

If the pulse be perceptible at the wrist, take twenty, twenty-five, or thirty ounces of blood from the arm.

If the case be lingering and doubtful, after much medicine has been given, then omit all other medicines but this:

Calomel, three grains; ipecacuanha, two grains; aloes, three grains; opium, half a grain.—Make into a pill: one to be taken every hour.

Barley-water, four ounces; brandy, or arrack, three drachms.—Mix: to be taken every hour.

The patient, if thirsty, is to be frequently supplied with acid drink, a wine-glassful of tepid water, acidulated with lime or lemon juice, or with nitric acid, may be given as often as the patient requires it. Mr. Annesley states, that *cold* water acidulated with nitric acid, was the general drink at the Madras hospital, and that it relieves a very distressing symptom, the burning sensation at the pit of the stomach.

The following remarks on blood-letting are so judicious, that they ought to have a place here, and cannot fail to be useful. They issue from the Board of Health established at the London College of Physicians.

"The remedy which is described to have been most uniformly successful, when it could be used, is bleeding, and this even in cases when the pulse was scarcely perceptible at the wrist. This practice seemed to apply itself to the root of the disease, by relieving the congestion of the venous system, which was invariably found loaded on examination after death, and which congestion (though only an effect of the first impression made by the attack of disease upon the constitution) appeared to be the immediate cause of death In the lighter cases, or in those of a severe nature which came under medical treatment before the pulse at the wrist was lost, or had become fluttering, bleeding was attended with the most decided advantage. The oppression of the chest, the burning heat of the præcordia, the spasms, the vomiting and purging, are stated in some instances to have ceased at once, in others on a repetition of the bleeding. In such as allowed a free extraction of blood, these effects very uniformly occurred; but even in some, when the pulse was indistinct, bleeding was successful if it could be carried to the extent of eighteen, twenty-four, or thirty ounces, the pulse rising in power, and becoming more distinguishable, in proportion to the flow of blood. If the pulse, in this state of feebleness, was distinct enough to give to the finger the feeling of oppression, bleeding was almost always successful. The blood drawn was always black, whether procured from a vein or an artery, and flowed with great difficulty, commonly first coming from the vein in drops, and gradually in a stream; but before it could be induced to flow with freedom, the patient often required the warm bath, friction, external and internal stimuli, to produce a sufficient quantity for his relief. If a small quantity only could be procured, the heart seemed to feel the loss without being relieved; the bulk of the blood actually circulating

being reduced, while the great mass of it, congested in the inferior and superior vena cava, did not make its way to the heart.

"The effect of bleeding was mechanical, and acted only as removing an obstruction to the passage of the blood from the distended venous system; and if not carried far enough to remove this impediment, and allow the large veins to empty themselves into the heart, such weakness was produced as is occasioned by the loss of blood in constitutions worn out by disease. This black blood was not inflamed. The quantity required for relief varied in different individuals; the best criteria of the proper time for desisting from bleeding, were the abatement of the spasms and oppression of the breath, the increased vigour of the pulse, the removal of the burning heat at the præcordia; but perhaps the most sure guide was the change of blood from a black to a more florid colour."

Sir William Crichton states, that the Russian physicians had usually agreed in recommending *bleeding* at the commencement, and the committee at Warsaw declare that bleeding practised *in time*, has been attended with very great success.

Mr. Hope, a surgeon in the Navy, recommends the following medicine for the cure of cholera, and states that for thirty years it has succeeded in his practice, in a very satisfactory way:

> Take of nitrous acid, (not nitric acid,) one drachm; peppermint water, or camphor mixture, one ounce; tincture of opium, forty drops.—Mix them, and give a fourth part every two, three, or four hours, in a cupful of thin gruel.

The belly should be covered with a succession of hot cloths, *dry;* bottles of hot water applied to the feet; and the patient should be allowed constant warm sippings of finely strained gruel, sago or tapioca. No spirit, wine, or fermented liquors must be permitted till restoration is established.

The wearing of a large flannel belt or waistcoat is of the first importance as a preventive measure, and should be particularly enforced on the poor. It has been found a great preservative in India.

I am glad to see that the Austrian Government, in their official regulations, issued during the period of the epidemic in 1832, call upon all the clergy to "inspire the people with confidence in Divine Providence;" and a late writer on this disease (Mr. Annesley) has the following remarks in point: "There is a moral courage possessed by some individuals, who are even the weakest, perhaps, as respects physical powers, which resists more efficiently the causes of intertropical diseases, than the bodily powers of the strongest, who are not similarly endowed" with this species of courage. This courage, which is often so acknowledged a safeguard in pestilential diseases, and which greatly softens all the calamities of life, is not that of the mind, but of the *heart:* it is not a natural courage, but that which is drawn directly from the skies, and inspired by the vital principles of pure christianity.

OF CHRONIC DISEASE IN GENERAL.

CHRONIC DISEASE is now so common as to be a subject of the highest moment, and one in which every individual may well feel greatly interested, more especially if married and at the head of a family. For there is scarcely a person, and certainly no family, in these kingdoms, where chronic affection has not been felt at some time, either as a general or local malady, and in its slighter or more severe forms. It is of much consequence that private individuals should be enlightened in respect to the *nature* and *general principles of treatment* of chronic disease, because great and lamentable ignorance prevails among some of the profession on these points, and the mode of proceeding in such cases is, consequently, often the very reverse of what it ought to be.

By chronic disease is here understood every malady to which the human body is subject, not of an acute character. This term, therefore, is now intended to embrace both simple disorders of function, and slight or severe organic injuries, which are of a chronic or indolent nature, wheresoever situated and how aggravated soever they may appear. The word *chronic* is opposed in meaning to *acute:* the former means indolent or slow, the latter active or energetic, and these two orders or genera comprehend every variety of complaint found in animal bodies. The acute diseases we meet with are either fevers of a specific nature, or active inflammations; all other disorders are chronic.

From this extensive signification of the term chronic disease, the reader will immediately perceive, that I intend here to advert only to the *nature* and *general principles* of treatment, applicable to such a condition, for to go beyond this would be to detail the proper mode of managing by far the greater number of maladies distinctly noticed in this volume. It is of great moment to have clear views respecting the nature or essence, and the principles of treatment, of such a class or order of disorders, as this knowledge forms a solid foundation for all our reasoning and plans, and will often guide us, and preserve us from error, under the occurrence of very extraordinary and untoward symptoms, and the darkness which may thence surround the malady of the patient.

In their nature or essence almost all chronic diseases are diseases of DEBILITY; that is, weakness, either general or local, oth, is present as the principal foundation of the existing malady, whatever may be its name, character, or seat, s is a point worthy of much attention. It demands

particular regard from the more respectable and higher classes of society, because their more sedentary and luxurious habits necessarily tend to the production of debility, and therefore chronic disease is very common among them. Almost the only exception that we make to this rule is in those cases of chronic disease which arise from mechanical injury, or the sudden impression of any deleterious agent, as, for example, metallic fumes, or a noxious gas. Here no previous weakness may have existed, yet it is generally induced by the effects of the injury. To be convinced that debility is for the most part the principal source or foundation of all chronic diseases, we have only to observe, 1. *The state of constitution* in which they are found; 2. *The symptoms* that accompany and characterize them; and, 3. The influence which different remedies exercise over them.

1. The constitution is more or less weakened or altered from what it formerly was, and the severity of the symptoms is ordinarily in proportion to the degree of general debility present. In viewing the patient, languor, listlessness, and an impairment of the strength are evident; and, for the most part, a decay of energy may be readily detected for some time prior to the occurence of any local affection.

2. The symptoms that accompany and characterize chronic disorder or disease are, a feeble pulse, weariness, impaired digestion, an appetite either deficient, voracious, or capricious, irregular bowels, furred tongue, a clammy, or dry, harsh skin, disturbed sleep, and pain, irritation, or uneasiness, in some part of the body. All these are symptoms of debility affecting the arterial and nervous systems, the digestive organs, and the skin, and thus involving all the most important functions in the frame.

3. We always find, that whatever inpairs the strength of the patient infallibly increases his disorder; and, on the other hand, every general plan which mildly and gradually augments the strength always does good, and frequently is of great service.

The reader must not suppose that *all* the symptoms above enumerated are present in every chronic ailment. In some cases, mild or severe, there may not be so many symptoms; in others, they may be far more numerous. In some, the signs of ill-health will be steadily the same till the patient recovers; in others they will be liable to much, and occasionally to extraordinary variation. Some patients have a good deal of hardness or tenseness and quickness in the pulse, and there may be a temporary fulness, instead of the feebleness and smallness usally met with. In a few instances, the bowels may be regular, the tongue tolerably clean, and the skin nearly healthy; but invariably debility is present to a greater or less degree, and

there is an alteration in the countenance of the patient. It is worthy of remark, that some patients are not at first very sensible of the weakness they really suffer under, and the reason of this is, that often it is only a trial of strength which discovers to us how much we have lost. Many persons also are averse to believing that they have really lost strength and energy. It will, consequently, be often necessary both for the physician and patient to examine very closely into the actual condition, which will always be immediately ascertained by both, when the real truth is thus honestly sought.

Not unfrequently patients suffer much in chronic disease from pain and inflammation in certain organs or parts, and unprofessional persons find it difficult to understand how so much apparent energetic action can exist in the same body with a great deal of real weakness, but it is reasonable to suppose, that debility and disorder existing together in the human frame will often give rise, especially in irritable habits, to such an irregular and inordinate action of the blood vessels of certain parts, as is synonymous with inflammation. In health, the blood vessels possess their natural vitality and *tonicity*, and easily resist any occasional impetus, whose tendency is to drive through them a larger quantity of blood than usual; but in the states of chronic disorder we now speak of, the natural vitality and tone of the vessels is much impaired, their coats therefore easily yield, and an augmented flow of blood takes place into them, which in these cases (the inflammation being chronic or indolent) is very generally attended with occasional or continued stagnation, of a kind peculiar to chronic affection. Consequently, although such inflammation is present, yet we cannot thence infer any other source or foundation for the malady to exist, than what I have here pressed on the attention of my readers.

The commencement of severe chronic disorders is often unperceived by the patient, and that for a long period, for sometimes the premonitory signs of such disorders being likely to fix itself in the frame are to be seen for many months. In numerous cases, these premonitory symptoms assume the form of a cold in the head, soreness or relaxation in the throat, general languor, hysterical feelings in females, or frequent head-aches, lowness of spirits, or cutaneous eruptions. Whenever such symptoms exist for any length of time, how slight soever they may be, the patient should without further delay seek the best medical advice, and patiently follow the use of the means prescribed.

Undoubtedly the constitutions of British subjects have undergone, within the last forty years, a considerable change, owing

to the vast increase of unsanctified knowledge, and the influx of wealth, which have unhappily greatly strengthened and extended "the pride of life," so natural to man, multiplied large towns and cities, and engaged a much larger proportion of the inhabitants than formerly in sedentary occupations. Such a state of things in a country like Great Britain, generates and diffuses mental solicitude and anxiety; although we in the general possess more than our forefathers of what this deceitful world can give, yet we are much less satisfied; luxurious indulgence is vastly increased;—the whole has produced an unfavorable change in the constitution, and chronic disease is, consequently, more widely spread than ever before was known. Therefore my chief object in these remarks is, to lead my readers to consider and remember, that debility is the principal foundation of the majority of maladies now met with in this nation, and that regard should constantly be had to this fact in the treatment of all complaints which are not of an acute character. This principle is applicable to the disorders of childhood as well as to those of adult age, and a reference to it is almost as much called for in the former as in the latter. In advanced life, we have the feebleness natural to that age, superadded to the ordinary sources of weakness, which should lead us to be still more cautious in the use of measures which tend to reduce the general strength.

The use of purgatives, of leeches, and the lancet is, perhaps, not so universal and manifest as it was some years since; but it is my opinion, they are now employed much more frequently and liberally in chronic complaints than is necessary or safe. Too many practitioners forget that nature commonly resorts to the mildest measures, and that by these the greatest advantages are gained. Her mode of operation is uniformly, not to pull down, but to build up, and the means which she employs are those which secure to the patient at once an increase of strength, comfort, and health. This should be our aim, and it is of importance that the public should be impressed with the fact, that commonly whatever plan of management distresses the patient and increases his discomfort, is certainly inappropriate and injurious.

I have adverted above to *simple disorders of function*, and to slight or severe *organic injuries*, and it is necessary that I should here describe what is meant by these terms. *Disorders of function* are complaints which are owing to some irregularity in the natural or healthy functions of the part affected, and which are mostly, if not always, curable; such, for example, are most cases of indigestion, incipient consumption, rheumatism, and gout. *Organic injuries* are diseases of structure. There is not only an irregularity in the healthy functions of the affected part, but also

an alteration in the organization or structure; which, consequently, renders it a fixed malady, commonly admitting only of relief, not of cure.* Such are confirmed cases of consumption, disease of the heart, liver, bowels, &c. &c.

The *general principles of treatment* are the same in all chronic complaints, whether they are organic diseases or only disorders of function; but weakening measures must be more cautiously guarded against in actual disease than where the functions only are deranged. These are:

1st. That the secretions throughout are to be restored to as healthy a state as possible:

2d. That we are always to keep in view the relief of irritation:

3d. That while we are aiming to fulfil these indications, the strength of the patient must be maintained and augmented to the utmost.

It has certainly been too much the practice in all chronic maladies to overlook or disregard the *third* principle, while aiming to accomplish the objects described in the *first* and *second*, from which circumstance many patients have necessarily suffered greatly for a time, and some permanently, as the mischief done by too low a diet, with bleeding, purging, or other active lowering measures could never after be perfectly surmounted. At this we cannot be reasonably surprised, because if the physical strength of certain individuals is reduced below a given point, it is often found impossible entirely to recover the injury thus inflicted,—the constitution is so shaken as to be unable again perfectly to rally. It ought never to be forgotten that debility is, ordinarily, the foundation of chronic disease, and also that local or general weakness is a common cause, indeed the chief cause, of unhealthy and depraved secretions. It follows from this, that when lowering measures are used, or permitted to operate, although the most efficient alterative medicines may at the same time be given, the secretions remain unimproved, and the patient, instead of getting better, grows worse, and for this obvious reason, that we are, by having recourse to enervating means, strengthening the foundation of depraved secretions, which is debility, and thereby rendering the most efficacious alteratives of no service whatever. This applies equally to a lowering treatment employed only for a

* In some instances, if the organic disease is recent and very slight, it is possible by a cautious and skilful mode of treatment, to remove it entirely. Indeed, in a few cases, the patient may recover, and live for years, after considerable organic disease has existed. For example, persons have perfectly recovered from such an attack of consumption as could leave no reasonable doubt of there being rather extensive organic injury in the lungs, and in a part of such cases, dissection, performed on the death of the patient, several years after, has fully ascertained the fact.—See my *Sure Methods of Improving Health, p. 192, et seq.*

few days or hours, and to that pursued for weeks; and these circumstances lead me to believe, that the very general practice among surgeons, of giving a patient a calomel or blue pill at night, and a brisk purging draught in the morning, often defeats its own objects of restoring more healthy secretions, by the weakness which it occasions. In this case, if the pill be given in combination with tartarized antimony, with or without a few grains, (as two or three,) of the compound colocynth pill, and without the morning purgative, it will seldom fail ultimately to accomplish the object desired, which I believe is frequently unattained when purgation is connected with it.

In all chronic diseases, it may be safely laid down as a maxim, that the secretions will often be restored to a healthy character by tonic remedies, simply used as such, while they can never be perfectly and permanently improved by the most efficient alteratives, whether simple or combined, which have an enervating effect, that is, which are so administered as to have this result. It is of great importance that this maxim should be kept constantly in view.

That debility is the fruitful source of depraved secretions* may be inferred from various characteristic circumstances: indeed, from the ordinary symptoms and progress of all chronic complaints. Whenever we meet with a weakly man, who perhaps may, nevertheless, not complain of any positive indisposition, do we not always find the secretions much deranged, and often in an exact proportion to his debility, the condition of the former ever varying with that of the latter, so that if the strength be increased, the secreting surfaces are immediately and evidently improved, while they are directly injured by the reduction of the general strength? If it be enquired, what is the kind of habit in which we witness severe and protracted ulcerations or pimples, or swellings, or inordinate discharges, and other evidences of a morbid action of the secreting vessels, is not the ready answer,—in that which is either originally weak, or which has become so from the influence of bad habits or deleterious agents? Again, in susceptible constitutions, where we fear the possible occurrence of tubercles or ulceration in the lungs, or of enlargement or ulceration of the joints or glands, &c. (such as is so frequently seen in strumous habits, or those disposed to scrophula,) is not the *correct* advice of the physician invariably to this effect,—if you can maintain the patient's general strength you place her in a state of security; but mark well, whatever tends to lower the general vigour of the frame, will threaten her very existence. The ordinary operation of

* By the term *secretions* is meant all the natural discharges which take place from any part of the body.

the most useful remedies concurs to prove the correctness of the assertion now advanced; for how frequently does it happen that the physician seeks in vain, even by the most powerful alterative medicines judiciously prescribed, to correct the unhealthy condition of the vessels just referred to, if he neglect to recommend, at the same time, means which have, what may be termed, a tonic effect. Thus it is that quinine, iron, and other tonics, given in conjunction with calomel, or blue pill, often accomplish such objects as are now spoken of, which the latter could not do alone, even under favorable circumstances in other points of view.*

These facts shew the utter folly of a sentiment common among a certain class of persons, that in severe chronic diseases, the constitution must in the beginning *suffer* under the operation of active remedies, in order to the cure of the existing malady. This is a sentiment which has been the source of innumerable evils, and whether expressed in words, or only in the practice of those who embrace it, ought never to meet with any quarter. It points to a way the very reverse of that dictated by nature, and therefore the reverse of what is right; for, after the slight shock occasioned by preparatory remedies is past, the moment she commences the cure of any disease, in the same moment does she begin to restore a comfortable feeling to the afflicted, which, in the main, increases and keeps pace with his gradual recovery.

Another grand indication in the general management of disorders of the digestive functions, is *the relief of irritation.* Keeping this principle in view may assist us very much in the correct application of the other principles just noticed, for if the measures taken to restore healthy secretions, or augment the strength, are productive of irritating or uncomfortable sensations, we may almost conclude that those means are either inappropriate in themselves, or employed in an unsuitable manner. The results of attention to it likewise tend greatly to strengthen the evidence in favor of the sentiments here advanced, respecting the necessity of increasing the general energies of the body as far as possible, for we invariably find that irritability, pain, and irritation, are closely connected with debility; so much so, that whatever augments the latter aggravates the former, and, on the contrary, we cannot take a more certain way of lessening the former, than by resorting

* For the same reason the professional man appears to me often to defeat his own intentions, when he advises in chronic disorders, the use of mercurial alteratives, for example, but likewise recommends, at the same time, local or general blood-letting. In this manner, he is frequently employing, in the same day, antagonist forces, and may be seen really, though unwittingly, creating greater disturbance than he was called to cure.

to those means which have the greatest influence in removing the latter.*

Acting on this principle of relieving irritation to the utmost, is also very frequently of eminent service in directing us to such measures as prove of great value in aggravated cases, which, at least in the beginning, do not admit of remedies tending either to improve the secretions or increase the strength. It must be remembered, that I now advert to protracted or extreme cases, in which we so commonly find excessive uneasiness or irritation, under various forms, and in which we are unable, with propriety, to do more than endeavour to sooth the malady of the sick, until a favorable change takes place, and permits us to advise measures capable of exercising a beneficial influence of a positive character. Here we have it always in our power to recommend the use of mild soothing means, calculated to relieve irritation, and thus to pave the way for the more speedy and more effectual application of remedies designed to fulfil the preceding indications, and thereby permanently to restore the patient's health.

TREATMENT. There is too much reason to fear that, in regard to chronic diseases, very many professional men fall into the same errors with respect to the body, that many clergymen, and other spiritual teachers do, in regard to matters of still greater moment, and which have a reference to the soul. The method of cure is far too complicated, and, therefore, we cannot be surprised if it ordinarily fails of the effect intended. It is true, that in the former case, as well as in the latter, the practitioner should direct his aim at the *root* of the malady, in order to secure a perfect and permanent cure; but he must take care not greatly to multiply his remedies, or to choose them chiefly from among the list of *artificial* means, for this will certainly defeat his purpose. It is man's method to endeavour to effect great ends by multiplied and extraordinary measures, but God, both as the God of nature and grace, accomplishes mighty ends by few and simple means. I entreat my readers never to forget this.

The young or inexperienced practitioner of medicine almost invariably proceeds in being called to a case of chronic disorder, to consider its character or name. He indeed notes the symptoms, especially the prominent symptoms; looks to the probable cause, and asks many questions, but all this is designed chiefly

* Indeed, we may take an extended view of the subject, and justly affirm that, as Mr. Abernethy expresses it, the relief of irritation is the great object of medicine. For, in proportion as we succeed in delivering our patient from all that is debilitating and annoying, so do we enable the constitution, or nature as some would say, to perfect the work of restoration. This sentiment is equally applicable to acute and chronic diseases.

to help him to see under what class the case is arranged by systematic writers, and what name is to be attached to it. In this sort of enquiry he is certain to be much assisted by the patients and their friends, (if he wishes it), for their first enquiry is, what is it? and a good deal of their anxiety centres here, and in having something like a suitable name given to it, they and the attendant are alike well satisfied. The malady being designated *Indigestion*, *Liver Complaint*, *Disease of the Heart*, *Consumption*, or something, as it is supposed, equally intelligible and significant, the practitioner immediately commences to prescribe the remedies recommended for those particular affections, and especially such as happen to be most vaunted at the time. The world is mad for change and fashion, and full of its effects, no less ridiculous than baneful, and since there is a fashion in medicine, the majority of medical practitioners are too much in danger of bringing the remedy or remedies of the day into confident and unlimited requisition. That the mark thus aimed at should sometimes be hit, and the patient cured, might reasonably be expected, but that the treatment should generally or very frequently succeed in reasonable time, and in a progressive satisfactory manner, indeed in any time or manner, cannot be anticipated. It commonly fails, and for the reasons I have previously pointed out, viz. that we have to consider not only the symptoms, the organ now most evidently affected, and what the disorder is to be called, but what organ is primarily and chiefly affected,—its influence upon the other organs of the body,—and what are the means by which we may most confidently expect a cure, a question which is to be determined not by having recourse to systematic divisions of disease, and the popular medical opinion of certain remedies, but to the real nature of the disorder, the external situation of the patient, the sex, the age, physical peculiarities, and weakness or strength of the individual. The organ now most sensibly affected is not always that which is most deeply implicated; very often the former is merely sympathetic or symptomatic of other mischief, detected by a discerning eye, sometimes with ease, at other times with extreme difficulty, and only after the closest observation. The place the patient inhabits, the constitutional peculiarities, even the previous treatment, the duration of the malady, the age—all these circumstances cause a great difference in cases, and call for a considerable variation in the use of remedies, and in the apportioning of their doses. The chief general principles of management are fixed and unalterable, and have been pointed out; but I wish to impress it on the reader's mind, that the means by which we are to fulfil the general and particular indications cannot be fixed, and are ever

varying, according to the variations in the several particulars above referred to. And it is chiefly in the variation and adaptation of these means to the particular circumstances of the patient,—in casting behind him scholastic and systematic divisions and names, which are in general only party-coloured representations,—and in never departing from the fixed principles of treatment, that the experienced practitioner discovers his superiority. Attentive to the progress of science, and desirous of embracing truth wherever he finds it, he is, however, resolved to trample under foot the fashion of the day, in regard both to the supposed prevalence of particular chronic disorders, with their designation, and the wonderful power of some *new* remedy. He knows that the asserted extraordinary frequency of a particular complaint, almost everything that can with decency being called by this name, whatever it may be, is very convenient for those who have neither the will or ability to call things by their proper names,* and to form just views; and that the *new* medicine is commonly only a forgotten or neglected one, which works well for the time, at least in the imaginations, and towards the pockets, of the ignorant and interested; till at length it is degraded, and must be replaced by something which is at least highly praised, as being of superior pretensions. All this base compound he casts behind him, and goes straight forward on the solid ground of fixed principle, and the well ascertained virtues of remedies; and in doing so he as generally succeeds, as those of the opposite class as generally fail.

I have thought it necessary to lay before my readers these brief remarks, in order that their minds might be impressed with the folly of following systems and fashions in medicine, and with the wisdom and advantage of attending to things as they are presented to us in nature. The received division of chronic diseases, the many names employed, have of course their use, in the way of facilitating an intelligible communication in speaking and writing, &c. but in the actual management of disease, we must not consider the names but the nature of things; we ought not to regard the opinions or reputation of men, so much as the evidence they present of the correctness of their sentiments, and we have a right to demand that this evidence should be full and satisfactory: we are called upon continually to forget names and arbitrary distinctions, to disregard supposed specifics, and to bend our minds to the investigation of the points before adverted to, the *cause* of the

* The desire of too many of the profession to get *a well sounding* name for chronic disorder, has of late been ridiculously manifested in the hackneyed use of the term "*liver complaint.*"

symptoms presented to us, the remedies for that cause,—the rational and undoubted principles on which we should act in endeavouring favorably to influence that cause. These are points altogether independent of names and arbitrary distinctions; they would exist if we had no systems, no names for diseases, and an attention to them would alone be sufficient to insure the utmost possible success in the efforts of the physician.

Proceeding on these views, we have more especially to consider in the treatment of chronic disorder, whatever may be its name, 1. The *general* plan on which the patient should be put; 2. The plan applicable to *individual* cases, particularly in regard to medicine.

1. The *general plan* is pretty much the same in all cases, being plainly connected with and directly resulting from the general principles (page 304). Thus every one who is out of health must be especially attentive to *food*, *air*, *exercise*, and the other parts of a salutary regimen. The food must be easy of digestion, smaller in quantity than when in health, well masticated, and of the best quality. The air should be freely enjoyed, either by walking, riding on horseback or in a carriage, as is most suitable, and it should be country air, not in too low a valley, nor too hilly a district. The exercises should be both in and out of the house, daily, and as vigorous as the strength will permit, commonly to the producing a free perspiration. The patient should retire early to bed, and rise early in the morning. Cheerfulness and thankfulness should be strenuously cultivated, which is almost synonymous with a due regulation of the passions.

2. *Among the many particular internal remedies* to be noticed, I may mention that my confidence is chiefly engaged by sarsaparilla, in the form of powder or extract, with a mild mercurial alterative pill at night,—by dandelion, sometimes a combination of sarsaparilla and dandelion,—by steel, or quinine, or a simple stomachic, as No. 104, page 121, with an alterative at night,—by ammonia,—and by aperients or purgatives. The mercurial pill is a remedy of uncommon power, and its composition may be varied at least twenty times, in order to suit the habit, peculiarities, or strength of the patient, or the stages, or other varieties or exigencies of the disease. An exact diet must be arranged with the preceding means.

The chief particular external or general remedies are the tartar emetic ointment, blisters, issues, warm or cold bathing, change of air, regulated and active exercise, friction, (see the *Sure Methods of Improving Health*,) travelling.

We may further illustrate what has now been advanced, by supposing that we are called upon to treat, say a case of

Breast-pang, (p. 267), Liver Complaint, Hypochondriasis, or Low Spirits, Gout, or Chronic Rheumatism. What should be our course of enquiry, our plan of action? These complaints are severally noticed, and no doubt the unprofessional person and the inexperienced professional person, will directly turn to the pages where they are to be found, and act according to the particular directions there given; and in doing so, the directions being, I hope, clear and correct, he is not likely to do harm, and will sometimes do good, if the case is a simple recent case; perhaps often much good. But the skilful practitioner pursues a different course, particularly in severe cases, he regards the actual condition of the patient, and considers not the name given to the malady, but its nature, the state of the secretions more especially, and of the strength generally and locally—he looks at the tongue as an index of the state of the secretions, feels the pulse, and enquiring respecting the appetite, points of uneasiness and pain, &c. he forgets particular names, and frequently so completely, that supposing a case of each of the above five disorders brought before him in succession, he will sometimes prescribe for each the very same medicines, (perhaps a little varying in dose), and succeed in curing each by the same means. For example, he might prescribe the pill No. 98, or 99, to be taken every night, with the stomachic pill, No. 104, twice a day, imposing in each case, the same attention to diet, and to the regulation of the bowels, by the pill No. 100, with perhaps an occasional purge, and, excepting in the case of *Breast-pang*, very active exercises daily, even to a free perspiration.* In the majority of cases, these or similar means will cure all these complaints, and the reason is, because the real cause or nature of the malady is the same in all these affections, namely, weakness of the stomach and bowels, with deranged secretions, and general debility—the several different local or prominent symptoms, whether it be swelling of the feet or hands, pains in the limbs, sallowness of complexion, or lowness of the spirits, being rather accidental, or determined by the

* The medicines above referred to are excellent, but it should be observed, that I do not recommend them exclusively; it is not my intention here or elsewhere, so to refer to them, as if in being consulted on chronic disorders, we had little to do but to advise the patient to take them, and be cured. By no means. I am now treating of the principles of the practice of physic, and what ought in regard to indications and states of body to claim our constant and especial attention; the particular means by which we endeavour to fulfil these indications, and to change the actions of the system from a condition of disorder to that of health, must frequently vary in the same disorder; and even in the same individual at different times; the state of the patient will often be such as to call for the exercise of the utmost penetration and effort on the part of the medical adviser, and herein, indeed, principally will be discovered either his deficiency or superiority. He will often be called upon to begin with one remedy as preparatory to another or to several others, which are to complete the cure, and on the skilful adaptation and succession of which, the deliverance of the patient will, humanly speaking, depend.

constitutional tendencies of the individual, than as marking any real difference in the complaints.

At this moment, (July 1834), a patient has left me, who has suffered for several months from great depression of spirits, palpitation of the heart, especially on laying down in bed at night, and other symptoms of nervous disorder; pain in the side, he supposes in the heart, and uncomfortable action in the bowels. Some months since he had a severe inflammation of the eyes, and for this was bled and purged briskly, which he thinks weakened him, and it is very likely to have been carried too far. On being consulted for this patient, I disregarded his nervousness, I had nothing to do with it but as a symptom, for which I was sure there must be some physical cause, (for he assured me there was no moral cause for it;)—that cause I found, on examination, was in the depraved condition of his secretions, and weakness of the stomach and bowels, shown by a very furred tongue, parched scaly lips, uneasiness after eating, especially if a full meal, and restless nights. His previous attack of inflammation of the eyes was no doubt owing to the same cause. In fact, he was suffering from severe derangement of his general health, in which the nervous system was particularly affected. My object was to improve his general health, and restore healthy secretions, leaving the nerves to take care of themselves, as, had it been a case of *liver complaint* or *gout*, I should have left the liver or toes to take care of themselves.* In this case, I prescribed a pill similar to No. 104, twice a day, and one similar to No. 99, every night, with great attention to diet and exercise, and he is rapidly recovering. In such examples, I think a draught of carbonate of soda, or of ammonia, with a bitter infusion, is generally prescribed, but I do not think this by any means so efficient a remedy as the pill No. 104, page 121; it has not so much of a tonic influence on the stomach, and does not assist so much in emulging the biliary ducts, and giving tone to the bowels.

Determination of blood to the head also is a case which may be advantageously brought forward to illustrate the principles and treatment we advocate. Here the ordinary plan is to order leeches to the head, sometimes to bleed from the arm, to purge, and to insist upon a low diet, the symptoms and name merely being regarded. To this view and treatment I object. The regard should be directed to the patient's actual state of health,

* By these remarks, I would not be understood to disregard or undervalue local treatment; this is valuable, especially in some instances, but it so very inferior and subordinate to the constitutional management, that we may properly say in attending of the latter, we are in general in no danger of leaving the local symptoms to take care to themselves. This is so strictly true, that in nine cases out of ten the patient will be perfectly cured by the constitutional treatment alone, but in no instance will the local means alone succeed.

without in the beginning noticing the affection of the head, for it is simply a local one, which will be most effectually influenced by the constitutional management. Thus, on enquiry, we always find the patient to be out of health,—the secretions certainly deranged, the digestive organs perhaps weak, the bowels costive or irregular, the nervous system enervated, &c.; and in placing the sufferer on a very mild alterative tonic plan, with simple cold washes to the head, we succeed admirably in his relief and cure; which on the bleeding and lowering course, if he is relieved for a time, it is only for a short period, the evanescent relief being followed by a return and aggravation of all the symptoms. Now and then, indeed, a single blood-letting may assist us in our invigorating plan, but in general I have not found it requisite, and even in persons who are stout, and have the *appearance* of strength, it must be resorted to very cautiously.

At this time (1834), I have a patient who has suffered long and most intensely from chronic disorder, which has shown itself chiefly in pains in the bones, with swelling of the *periosteum*, that is, the membrane covering the bones. Several years since, she began to suffer greatly in this way, and has been driven in vain from one medical practitioner to another up to the present date. On her first coming to me, I found her extremely weak, depressed in spirits, emaciated, with a tongue loaded with a thick greenish offensive looking fur, and a quick small pulse, considerable swelling of different bones of the head, and in other bones, attended with such constant and agonizing pain, especially at night, that for weeks together her sleep had not averaged more than one hour in the twenty-four, if so much. She described the treatment under which she had been generally put, as consisting chiefly in the active use of mercurial medicine, and under the employment of which she had been salivated at least twelve times within a few years. Formerly she had severe pain in the right side, and her disorder was deemed a "*a liver complaint*;" latterly there has been occasionally a good deal of pain in the left side, but none in the right. There is now a tendency to the accumulation of fluid within the abdomen, and a great deal of hardness on the left side, over a considerable space, as if the spleen were unusually enlarged and indurated: in the right side there is no hardness. At different times she has been subject, as we might have anticipated, to severe nervous attacks, of an extraordinary character, the chief symptom being such peculiar uneasiness and pain in the limbs, as to have resembled that arising from the blows of a wooden hammer, and accompanied, at least to herself, with the sound of the hammer.

On a first interview, this lady was altogether in the most

deplorable condition imaginable, and to render it still more so she knew not where to turn for relief. She had recently been nine months under the care of a surgeon in London, and for several years previously under the directions of many physicians and surgeons there, in regular succession, without the least permanent benefit; indeed the temporary relief which followed each salivation was dearly paid for by the speedy recurrence of her pains and swelling, under, of course, aggravated circumstances. It should be borne in mind, that every practitioner who succeeded the first or second, was aware of this history; yet down to the last she was told by each that the swelling of the bones, and her intense pains, would yield only to the active employment of mercury! with what feelings she continually heard this we may well conceive. The last person who attended her, among other things, gave her *iodine!* It cannot be wondered, that she almost resolved rather to die than again to submit to medical treatment, and that she came to me with unusual hesitation and distrust.

I mention the preceding particulars to show the condition of the patient. What was to be done? Undoubtedly my duty laid chiefly in noticing the principal points of her history, in what she had formerly suffered, both from the disease and the medical management, or rather mismanagement, and in attentively considering her present actual condition, without any reference whatever to the medical opinions given her, or the arbitrary distinctions of diseases; and in doing so, the inference appeared plain and undeniable, that no active use of mercury could possibly do otherwise than injure her, and it also appeared very evident, that her condition called for the skilful use of some mild yet powerful vegetable alterative, together with a simple generous diet, and salubrious country air. She also required some anodyne to assuage her most severe pains, and for these some Dover's powder and extract of hemlock were ordered: this, however, produced no effect whatever, and little good arose from the other means used at that time. She tried the vapour bath, the nitric acid, and the powder of sarsaparilla, but to no purpose. After a little time she removed into the neighbourhood of Croydon, and was ordered a small pill similar to No. 99, page 120, every night, with some pills in the day, composed of compound extract of sarsaparilla, rhubarb, and ipecacuanha, her bowels and diet being carefully regulated; by which means principally she very soon began to feel sensibly relieved, and was enabled, in some measure, to attend to her domestic duties. She has now little pain and swelling of the bones, walks abroad, and obtains comfortable nights, and this is the alteration effected in the course of two or three months.

Lately I have seen a gentleman who suffers much from de-

ranged general health, but what distresses him most is a lameness, the consequence, as he supposes, of *varicose veins*. I believe the varicose veins in this case to be rather coincident with the lameness than the cause of it, its origin being really in the derangement of the general system. It is natural for each of us to think our personal complaints to be of considerable, if not superior, moment, and this gentleman was not a little disappointed, that I had not noticed *varicose veins* in a distinct article in the present publication; but this is not necessary, as the present remarks on the nature and treatment of constitutional maladies, will shew much more clearly than I could otherwise do, the proper course to be pursued. Sometime ago he went to a surgeon at Gloucester, who was confident he could readily cure him, by puncturing the veins, and a physician at Cheltenham sanctioned the trial of this method. This was like seeking the living among the dead, as such numbers unhappily do; the surgeon might as well have expected to cure the affection by whistling to it, and I need hardly add, the patient came away rather worse than he went. He is now pursuing a wiser course,—endeavouring by every proper means to improve his general health and strength, taking efficient alterative medicines, allaying local irritation by simple measures; and the benefits of this course are sensibly felt. We wait for time to prove whether under this plan we shall not witness a cure.

OF COLIC.

Colic is a griping pain in the bowels, chiefly about the navel, and often accompanied with a painful distension of the whole of the lower region of the bowels, with vomiting, costiveness, and spasmodic contraction of the muscles of the abdomen.

There are several varieties of this disease, the principal of which are, the stercoraceous colic, or iliac passion; the Devonshire, or painter's colic; the flatulent colic; and the constipative colic. We shall not notice each of these separately, because the causes and treatment are, for the most part, the same in every variety; but the first is chiefly remarkable for the vomiting of the fæces, or of substances injected by the anus; the second for its attacking painters, plumbers, and other persons exposed to the poison of lead, and being frequently followed by palsy of the wrists and arms; the third, from the existing symptoms of great flatulence, and the relief following the expulsion of wind; and the last, for the obstinate constipation and great tension present, with little flatulence.

The complaint is produced by various *causes*, such as crude, indigestible fruits; long continued costiveness; cold beverages

on a heated stomach; catching cold in the feet or bowels; violent purgatives; worms; calculous, or other concretions formed in the intestines; transferred gout or rheumatism. The cause of the painter's colic is invariably the poison of lead received into the system, from exposure to its fumes, or from taking it internally, as is sometimes done by persons who drink impure cyder or wine.

The colic is to be *distinguished* from inflammation by the spasmodic contraction of the muscles of the abdomen; by the absence or trifling degree of fever; by the pulse being little affected; and by the ease with which the patient submits to pressure, which indeed frequently affords relief. Severe colic, however, is sometimes, in its progress, combined with inflammation, which will be known by the usual symptoms noticed under that head.

Treatment. The indications are to relax the spasm, and to evacuate the bowels; and the most powerful remedies are the warm bath,—warm fomentations,—copious warm clysters,—opium, either by the mouth or in clysters,—stimulants to the belly, as blisters, or volatile alkali rubbed on it,—purgatives,—aromatic stimulants, and antispasmodics, internally. The patient may be directly plunged into a warm bath at 98, or 100 degrees, or warm fomentations be applied over the bowels, a large dose of castor oil being likewise administered, or one of the purgatives marked No. 27, or 28, page 103. Frequently it will be advisable to give two or three of the pills No. 97, and to assist their operation by occasional doses of No. 73, page 114. A copious clyster, as No. 8, page 97, is sometimes a valuable remedy; and if the first be insufficient, a second or third may be injected without delay. Often the administration of opium is necessary, and one of the best forms is an injection: a hundred and twenty drops of laudanum may be mixed with four ounces of warm olive oil for this purpose. If the colic continue obstinate, notwithstanding the employment of these means, a large blister should be laid over the bowels; and in case of great irritation of the stomach, with frequent vomiting, the effervescing saline draught, No. 24, page 102, may be taken, with or without ten drops of laudanum, or a little brandy.

The colic which is so frequent in the West Indies may be successfully treated in the same way, but here a five or six grain dose of calomel is often of much service, if administered early.

As an outline of the treatment called for according to the particular *causes* of the complaint, we may say, that colic proceeding from cold acid beverages will require antacids, combined with aromatics and anodynes, as No. 79, page 115, to

which mixture two drachms of tincture of henbane, or thirty drops of laudanum, may be added; this should be followed by the exhibition of the clyster No. 8, page 97. If it has been caused by acid, indigestible fruit, or food, an emetic of thirty grains of ipecacuanha powder in brandy and water should be the first thing taken, and after it has ceased to operate, the mixture No. 79 may be taken as just advised, and followed by a warm purgative, as No. 25, page 102. If the colic has been produced by eating fish, Cayenne pepper is an almost unfailing antidote. In the flatulent colic, a small quantity of brandy, or an aromatic cordial, as a drachm of aromatic confection, with a table-spoonful of tincture of rhubarb, and a little peppermint water, is often effectual. But here the assafœtida injection is still more useful, and sometimes acts like a charm. See No. 10, page 97.

When all the above means fail, cold applications have been resorted to with success, especially the dashing of cold water upon the thighs and abdomen, or the application of ice, or snow.

Whenever inflammation supervenes, or a decided tendency towards it, evidenced by shivering or a full pulse, blood should be drawn freely from the arm, whatever may be the cause of the colic.

In the painter's colic, the use of large doses of opium should be the first thing resorted to, as experience has proved it to be the most powerful means of relieving the spasmodic pain in this species of colic, and of preparing the way for the effectual operation of subsequent medicines. The patient should, therefore, take immediately sixty drops of laudanum in a little cinnamon water, which may be repeated in the course of two hours, if relief be not obtained. When the spasm begins to relax, purgative medicines should be administered, and castor oil, in free doses, is one of the best purgatives that can be employed. If the pain return, opium should again be exhibited, and afterwards opening medicine, and so on till the disease is entirely overcome. Should the complaint be particularly obstinate, the opium may be combined with calomel, in the following proportions, purgatives being still occasionally interposed.

Take of calomel, six grains; purified opium, twelve grains; conserve of roses, a sufficient quantity to make the whole into six pills.—One to be taken three or four times in the twenty-four hours.

The poison of lead frequently occasions a palsied state of the wrists and arms, for the removal of which, the nitrate of silver, or small doses of calomel, seem to be the most efficacious medicines. The nitrate of silver may be given in the dose of two

or three grains, made into pills with a little bread crumb and mucilage, and repeated two or three times a day. This has performed cures in cases of considerable standing.

Persons subject to colic should be attentive to their diet, and to the regulation of the bowels, and particularly avoid cold, indigestible, or undressed vegetables. Painters, plumbers, and others exposed to the fumes of lead, should observe the greatest cleanliness, and always wash their hands and face before taking a meal, and, if possible, throw off their dirty clothes after leaving work. These precautions would often prove a sufficient security against the poisonous effects of the mineral.

OF PULMONARY CONSUMPTION.

Pulmonary consumption consists in a general emaciation of the body, with debility and cough, for the most part attended with hectic fever, and frequently with purulent expectoration. Many physicians call that disease alone pulmonary consumption, or *phthisis pulmonalis*, which is the consequence of the development in the lungs of a particular species of accidental production, called *tubercle*, but I doubt the propriety of this exclusive view; and in a popular work it is certainly more advisable to call that disease consumption, which is attended with its ordinary signs and runs its usual progress, and which is owing to some organic changes within the chest. I would therefore say, there are three or four species of consumption.

This is a disease of the first importance, both on account of its frequency and fatality. It has been pretty accurately calculated to carry off prematurely one-fourth of the inhabitants of Europe; and it is supposed, that the annual victims to its ravages in Great Britain exceed fifty-five thousand.

There are three species of this disease, viz.

1. *The catarrhal consumption.*
2. *The apostematous consumption.*
3. *The tubercular consumption.**

As each of these species differs, in its symptoms, in some degree, from the others, and requires a different and sometimes an opposite treatment, I shall treat of them distinctly; but previously, it will be advisable to notice the symptoms and causes which are, for the most part, common to all, when the particular signs distinguishing them from each other will be more easily and clearly defined.

* Some physicians have enumerated a fourth species—the *dyspeptic consumption*, and I like this addition; but as in a practical medical work intended for the public in general, it is highly advisable to make the divisions of a disease as few as possible, in order to prevent confusion, I have noticed the symptoms and proper treatment of this species under the head of Indigestion, from which complaint it originates.

The earliest *symptoms* of consumption are often insidious and obscure. The patient is, perhaps, sensible of an unusual languor, and breathes with less freedom than formerly, so that his respirations are shorter and increased in number. He coughs occasionally, but does not complain of its being troublesome, and rarely expectorates at the same time; yet if he make a deep inspiration, he is sensible of some degree of uneasiness in a particular part of the chest. These symptoms gradually increase, and at length the pulse is found quicker than usual, particularly towards the evening; a more than ordinary perspiration takes place in the course of the night; and if the sleep be not disturbed by coughing, a considerable fit of coughing takes place in the morning, and the patient feels relaxed and enfeebled. This may be said to form the first stage of the disease.

The cough increases in frequency, and, from being dry, is accompanied with a purulent mucus, varying, according to the peculiar modification of the disease, from a watery whey-like sanies occasionally tinged with blood, to an expectoration of nearly genuine pus; and the malady is now decidedly established. The fluid spit out may be livid, deep-black, light-brown, light-green, or yellowish-white; flattened or round; hard or soft; fetid or without smell. In many cases it is very scanty, and it may happen that there is no expectoration at all; for in the apostematous species, the sufferer has now and then died before the abscess has broken. Commonly, what is called a *vomica*, or abscess in the lungs, is the result of the softening and bursting of a mass of tubercles. The uneasiness in the chest, only perceived at first on making a deep inspiration, is now permanent and attended with a sense of weight; the hectic fever has assumed its full character; and the patient can only lie with comfort on one side. The strength now fails apace; the pulse varies from about a hundred to a hundred and twenty or thirty; the teeth increase in transparency, and the white of the eye is pearly-white; the fingers are shrunk, except at the joints, which become prominent; the nails are bent for want of support, and become painful; the nose is sharp; the cheeks are red; the eyes sunk, but bright; the countenance as if smiling; the spine projects; and the shoulder blades stand out like the wings of birds.

The local pains in this disease are uncertain; most of the patients have some pain; many have none at all, and some have very acute pain. In general, the pains in the chest in cases of phthisis are owing to slight chronic pleurisy, that is, chronic inflammation of the membrane lining the chest.

The third stage is melancholy and distressing. It com-

mences with a depressing and colliquative looseness; but till this period, and occasionally, indeed, through it, the patient supports his spirits, and flatters himself with ultimate success. The voice becomes hoarse, the mouth beset with small white pustules, or the throat ulcerated. Frequently dropsy, in various forms, now makes its approach; a languid delirium sometimes occurs; but, in general, the faculties are entire, and the senses acute: till the extremities grow cold, and the closing scene arrives.

Though this is the common progress and termination of the disease, yet it varies considerably in the character and combination of its symptoms. We may clearly distinguish, 1. *Regular manifest consumption;* 2. *Irregular manifest consumption;* 3. *Latent consumption;* 4. *Acute consumption;* and 5. *Chronic consumption.*

The *first* is that which observes the regular course described above; the *second*, includes those cases of phthisis, in which the disease seems to begin in some other organ besides the lungs. For example, it is by no means uncommon to find the local and general symptoms of consumption, preceded by chronic diarrhœa or looseness of long standing. Here often ulcers exist in the intestines, and small miliary tubercles. 3. *Latent* consumption is that where the symptoms are masked for a long time, as by nervous disorder, habitual indigestion, or common cough.* 4. *Acute* phthisis are those cases which unfold themselves all at once, with acute fever, emaciation, and other symptoms of such severity as to carry off the patient sometimes as early as the end of six weeks, or even a month. 5. *Chronic* phthisis includes those examples which last five or six years, or even longer.

The chief predisposing *causes* appertain to a peculiarity of constitution, marked by a long neck, prominent shoulders, narrow chest, long slender fingers, and symptoms of constitutional irritability that is easily affected by external agents. The occasional causes are very numerous, as frequent and sudden changes of temperature, or imprudent exposure of the body to cold; the dust to which certain artificers are exposed, as needle-pointers, stone-cutters, millers, &c.; overaction in speaking, singing, or playing on a wind instrument; the irrita-

* These are cases in which previous disorder of some kind has existed for a long time, and which has terminated in consumption, from the previous disorder not having been cured. A case of this description is the following:—A person for several years hypochondriacal, but who still preserved his strength and plumpness, (a pretty sure sign that he would have recovered his health, *Deo volente*, had he used the proper means,) was suddenly attacked with an acute catarrh, which was succeeded after five days, by an expectoration of *pus* and mucus, mixed with a little blood. These symptoms subsided in the course of a few days; but after six months they were succeeded by symptoms of a decided phthisis, which carried the patient off in six weeks.

tion of various other diseases, as measles, small-pox, hooping-cough, asthma, or syphilis; the sudden suppression of a cutaneous disease, or of any habitual discharge; the irritation of a too rapid growth of the body; and the operation of the depressing passions. The disease may also arise from the lodgement of any extraneous substance in the gullet, or in the windpipe; from profuse evacuations; and from continuing to suckle too long under a debilitated state.

Consumption is often said to be caused by spitting of blood; it certainly not unfrequently follows the discharge of blood called *hæmoptysis*, but very generally tubercles in the lungs precede or are co-existent with that condition of those organs which gives rise to hæmoptysis, and we ought consequently to say, that the spitting of blood is rather a sign or symptom of consumption than the cause of it. The particular consumptive constitution most liable to hæmoptysis is distinguished by the brilliant whiteness of the skin, the bright redness of the cheeks, the narrowness of the chest, the projecting or winged configuration of the shoulders, and the slenderness of the limbs and trunk.

A French physician who had an uncommon experience in consumption says, "it has appeared to me that almost all those who become phthisical, without being constitutionally predisposed to the disease, might attribute the origin of their complaint to grief, either very deep or of long continuance." The species of consumption to which artificers are liable who are exposed to much dust, is the catarrhal, called *bronchitis*.

OF THE CATARRHAL CONSUMPTION.

In this species, the cough is frequent and violent, with a copious excretion of a thin, offensive, purulent mucus, rarely mixed with blood; generally, soreness in the chest, and transitory pains shifting from side to side. It is chiefly produced by catching cold, or the neglect of a common catarrh; and in the first stages of this disorder, there is, perhaps, less of hurry and constant difficulty in the breathing, than in the tubercular kind. It may occur in any habit, and at any age.

This species has its seat in the membrane lining the windpipe, or its terminations; and the consumption following measles and hooping-cough is generally of this kind. It is the pituitous consumption of the German physicians, and is often called *bronchitis* by English practitioners.

Treatment. The most efficacious remedies for this kind of consumption, are turpentine, capivi balsam, myrrh, Iceland

moss, the tar fumigation, and Prussic acid. I have known Godbold's balsam very useful. Dr. Duncan, of Edinburgh, states, (*Observations on Pulmonary Consumption,*) that, in several instances, he has known cough, with alarming appearances, removed by the use of this balsam. It may be taken to the extent of a dessert-spoonful three or four times a day, and if it be applicable to the case, it generally works a beneficial change within a fortnight. Turpentine, capivi, and myrrh, have all been highly praised in this disease, and they will frequently be found beneficial. Sir Alexander Crichton recommends the following form:

> Take of capivi balsam, two drachms; tolu balsam, one drachm and a half; mucilage of gum arabic, half an ounce; best honey, two ounces; tincture of opium, half a drachm; syrup of tolu, two drachms.—Mix, and take a tea-spoonful morning, noon, and evening.

The capivi balsam may be taken alone on sugar, to the extent of thirty or forty drops, three times a day, and gradually increased to fifty or sixty drops. If it produce sickness, it may be taken in a little cinnamon or pennyroyal water, with the addition of a few drops of spirit of wine. Should it prove purgative, a few drops of paregoric elixir may be added to each dose. The oil of turpentine may be administered in doses of thirty drops, two or three times a day, mixed with mucilage of gum arabic, or yolk of egg and water.

The vapour of boiling tar has been much praised lately for its efficacy in consumptive cases, and there is no doubt that it has effected a great and favorable change in particular instances of catarrhal phthisis. Whether it has been useful in any other species, I am not prepared to say, but consider it very doubtful. Dr. Paris observes in his treatise on the art of prescribing on fixed and scientific principles, "During Sir A. Crichton's late visit to this country, I was induced by him to make trial of its effects, and I do not feel any hesitation in stating, that the result has led me to believe that it may, in some cases, be attended with benefit. The tar employed should be that used in the cordage of ships; to every pound of which, half an ounce of subcarbonate of potash, must be added, in order to neutralize the pyroligneous acid generally found mixed with tar, the presence of which will necessarily excite coughing; the tar thus prepared is to be placed in a suitable vessel on a lamp, and to be kept slowly boiling in the chamber during the night as well as the day; the vessel, however, ought to be cleansed and replenished every twenty-four hours, otherwise the residuum may be burnt and decomposed, a circumstance which will occa-

sion increased cough and oppression on the chest. The ancients entertained a high opinion of the efficacy of tar in pulmonary diseases."—*Paris's Pharmacologia, vol.* ii. *page* 309.

When the pulse is hard and full, the skin hot and dry, and the expectoration scanty, Sir Alexander Crichton does not employ the tar vapour; and when there is the slightest appearance of spitting of blood, it must be avoided.

The tincture of meadow saffron, in doses of from six to ten drops, thrice a day, is sometimes very useful in this and other species of the complaint, particularly in the incipient stage.

Blisters and issues are often very serviceable in this species of consumption, and, indeed, in every other kind. They are, perhaps, more generally applicable in phthisis than almost any other remedy.

Many physicians have extolled the Iceland moss, and it has, like every other remedy, suffered from their not describing the kind of cases in which it is most applicable. In the present modification of this disease it is frequently a valuable remedy, especially when following measles, hooping-cough, and small-pox. The preparation for the decoction of Iceland moss may be seen at page 44. It is likewise in the catarrhal consumption that decoctions of colt's-foot, lungs-of-oak, and ground-ivy are sometimes highly restorative.

The diet should be the same as is recommended for the tubercular phthisis.

OF THE APOSTEMATOUS CONSUMPTION.

This modification of the complaint occurs mostly in the plethoric, sanguine, and those in whom there is an appearance of vigour. It frequently commences with a spitting of blood; and when, in such a constitution, phthisis has followed acute inflammation, wounds, or blows upon the chest, we have reason to conclude the patient labours under apostematous consumption. The pain in the breast is fixed and constant, so is the difficulty of breathing, and the patient can lie only on one side; the cough is not the short tickling cough of tubercular phthisis, but is as violent as that in the first species, though attended with little or no expectoration.

The apostematous species mostly attacks young persons of a high florid complexion, many of whom are of the most blooming and promising appearance, when it is often remarkably rapid in its progress, which has gained it the vulgar, but not inappropriate name, of a galloping consumption. It is the florid phthisis of many writers; and is frequently situated deep in the substance of the lungs.

TREATMENT. The most appropriate and powerful means of curing this species,* consists in the administration of ipecacuanha, digitalis, acids, charcoal, emetics, and myrrh; and in the employment of blood-letting, a spare diet, and a reduced atmosphere, or the inhalation of hydrogen, or hyro-carbonic acid gas. If the pressure of symptoms, in a patient of a sanguine habit, and in the prime of life, require immediate relief, blood may be taken from the arm to the amount of six or eight ounces, and occasionally it may be proper to repeat the bleeding to the third or fourth time. But bleeding is rarely advisable in consumption, except under a violent onset of the present species; and we may generally trust with as much confidence, and greater safety, to ipecacuanha, acids, and a milk diet, to lower excessive vascular action, and to check spitting of blood. For this last symptom, the draught of ipecacuanha wine and sulphate of soda, is particularly valuable, as it is also for the reduction of inordinate vascular action generally.

Take of ipecacuanha wine, one or two drachms; sulphate of soda, one drachm; infusion of Angustura bark, ten drachms.—Mix for a draught, to be taken three times a day.

The digitalis (foxglove) was at one time a popular remedy for

* Some physicians seem to doubt whether consumption, when truly formed, is ever cured, but this is to disregard the evidence of our senses, (which some people are not unwilling to do,) in a matter of fact. In my opinion, they may with as much propriety deny that indigestion, when fully formed, is curable. Notwithstanding the uncommon fatality of consumption, do we not happily see continually cases recover which had been by every one thought desperate, and that after hectic fever was clearly established? Can any man long in extensive practice deny this, without disputing the reality of a matter of fact? I think not. Supposing that ulceration has taken place in the lungs, why should it not heal there, under efficient treatment, as well as elsewhere? No good reason can be given why it should not; and, indeed, we know it may. The following sentiment of Mr. Abernethy on this point, may be acceptable to many of my readers. It is oddly expressed, and embraces only a limited view of the subject, but is, nevertheless, valuable. He says, "Can consumption be cured? bless me, that's a question which a man who had lived in a dissecting room would laugh at: how many people do you examine who have lungs tubercular, which are otherwise sound. What is consumption? It is (ulcerated) tubercle of the lungs; then, if those tubercles were healed, and the lungs otherwise sound, the patient must get better."—*Anatomical Lectures.*

In corroboration of the sentiments above given of the curability of ulcers in the lungs, which was advanced before I was well acquainted with M. Laennec's researches, I would here introduce a report of his dissection of the body of a woman, aged 52, who died from disease in the chest after she had been "many years cured of consumption." She had many years suffered from disease in the chest, but the dissection proved that an ulcer which she formerly had, had been perfectly healed. "In the upper and posterior part of the right lung, (he says, *Treatise on Diseases of the Chest*, page 171,) there was found an excavation of an oval shape, about two inches in length, above an inch broad in the centre, and the sixth of an inch deep. The inner surface of this cavity was smooth and polished, though somewhat irregular; it was white, but interspersed with red specks, arising from numerous small vessels. This cyst was entirely empty." M. Laennec's work contains several cases equally conclusive, and in M. Andral's *Clinic. Medical*, vol. iii. page 382, eight or ten examples of cicatrization of the lungs after tubercles are given. Laennec says, page 305, "I am convinced, from a great number of facts, that, in some cases, consumption is curable in the latter stages, that is, *after* the softening of the tubercles and the formation of an ulcerous excavation."

this disease, and though it has, unquestionably, effected cures, I am not aware that any warm advocate for its use has distinctly pointed out the kind of cases in which it is chiefly beneficial. From its sedative power it would seem best, if not exclusively, adapted to the present florid species; indeed, it is doubtful whether it be not generally hurtful in any other. The dose of the tincture of foxglove is five or six drops, in the commencement, thrice a day, which may be gradually increased to ten or twelve. When the stomach and head are disordered by a small dose, a little lemon juice will almost always remove the sickness and vertigo, and enable the patient to take a full dose without inconvenience.

Almost all acids are powerful sedatives, and at the same time refrigerants, and astringent tonics; they are valuable medicines in apostematous consumption, particularly the acetic, citric, and other vegetable acids. Dr. Mason Good was partial to their use, and Dr. Roberts has used them with success. Persons far gone in consumption have been known to recover from merely subsisting alone on lemon juice, or butter milk. Dr Good justly remarks, that acids diminish action generally, check night sweats, restrain spitting of blood, retard the pulse, and produce costiveness. But I suspect they are rarely applicable to any other than the apostematous phthisis.

Take of acetic acid, four drachms; infusion of cascarilla, seven drachms; syrup of marshmallows, one drachm.—Mix for a draught, to be taken three or four times a day.

The elixir of vitrol was formerly much esteemed in consumption, and may be very useful in the present kind, especially when the abscess is in the state of open sore, since it is well adapted to promote the secretion of healthy pus, and the formation of granulations. It seems to be improper in the inflammatory stage, in the commencement of the disease; although in the advanced periods it may be frequently serviceable.

It is said, that an intelligent physician in the county of Cork, prescribed carbon (or charcoal) with the greatest success in consumption during a long series of years. Emetics have likewise been found very beneficial; and both these remedies seem best suited to the present species. I am inclined to think well of the juice of colt's-foot in this kind of phthisis.

Dr. Percival considered myrrh to be the most useful remedy which modern practice has adopted in consumption; and Dr. Duncan, senior, speaks highly of it, more especially in the apostematous kind, and, as I suppose, in the latter periods of the disease, when there is an open abscess in the lungs. Twenty or thirty grains of powdered myrrh may be given twice a day,

combined with six grains of nitrate of potash, or with ten grains of cream of tartar.

The inhalation of hydrogen gas, or hydro-carbonate, has been resorted to with great advantage in some cases of florid consumption. The patient may twice a day breathe from a pint to a quart of the gas at a time, diluted with from twelve to six times its measure of common air. The vapour of ether may be used as a valuable substitute. It sometimes affords great relief to the cough and difficulty of breathing. One ounce of ether should be mixed with half a drachm of powdered hemlock, and two tea-spoonfuls of this mixture be put into a wine-glass, and inhaled till the whole is evaporated. This should be repeated three, four, or five times in the day. Or, a large tea-pot may be well scalded with boiling water, and directly the water is poured off, a tea-spoonful, or more, of ether may be thrown in, and the cover being put fast down, the patient should inhale the vapour by putting the spout into his mouth.

The diet, in this species, ought to be very mild, and in the commencement sometimes spare. It often begins with spitting of blood. There is, for the most part, a good deal of increased vascular action, with a florid complexion, and the food should then consist entirely of milk, and farinaceous decoctions. Patients labouring under severe apostematous consumption, have often derived signal advantage from living solely on milk. Butter-milk is sometimes an excellent article of diet for them. The decoction of Iceland moss may likewise be tried, with snail-juice mixed with milk, or made into a custard.

OF THE TUBERCULAR CONSUMPTION.

Here the cough is short and tickling; and there is an excretion of a watery whey-like sanies, sometimes with a reddish tint; the pain in the chest is slight, or altogether absent; there is an early loss of flesh and strength; the difficulty of breathing generally, is only distressing upon motion of the body, or any considerable exertion; and there is mostly an habitual elevation of spirits. Spitting of blood is very rarely an early symptom here.

This species arises from small hard tumours, of a light colour, called tubercles, situated in the cellular substance of the lungs. The tuberculous matter, at first, has the appearance of a grey semi-transparent substance, which gradually becomes yellow, opaque, and very dense. Afterwards, it softens, and gradually acquires a fluidity, nearly equal to that of *pus*, and being then expelled through the windpipe, cavities are left, vulgarly known by the name of *ulcers in the lungs*, but which are *tuber-*

culous excavations. It is often very insidious in its commencement, and attacks chiefly those of a pallid scrophulous habit.

TREATMENT. Those remedies which promise most in the tubercular consumption, are preparations of steel combined with myrrh and other tonics, a pure air containing the largest quantity of oxygen, or vital gas, a nutritious diet, and a regimen tending to invigorate the body. The most approved form of administering steel and myrrh in this disease, is that so strongly recommended by Dr. Moses Griffiths.

Take of myrrh, in powder, one drachm; subcarbonate of potash, twenty-five grains; rose-water, seven ounces and a half; sulphate of iron, a scruple; spirit of nutmeg, four drachms; white sugar, one drachm.—Mix, and take three or four table-spoonfuls, thrice a day.

This is to be recommended chiefly in the latter stages of the complaint, it being, for the most part, too heating at the commencement. If the patient prefers it in pills, he may take the following:

Take of myrrh, in powder, two drachms; sulphate of iron, one scruple; subcarbonate of potash, one drachm; extract of gentian, one drachm and a half; simple syrup, a sufficient quantity to make the whole into a mass. Divide into sixty pills, and take two or three, twice a day.

Chalybeate waters are also an appropriate, and sometimes useful remedy; and so is the Angustura, or columba barks.

The diet should be nutritious, particularly in the latter periods of the disease. A certain quantity of the milder kinds of animal food, and even a little wine when the strength is much reduced, are proper, if they are not found to increase the exacerbations. The object here is to nourish without stimulating, and all kinds of milk, with fresh eggs, are advisable. It must be remarked, that in every species of consumption a much freer diet is required in the advanced periods of the disease, than can be safely indulged in at the commencement.

In all kinds of consumption particular symptoms require palliation; such are pain in the chest, cough, and night sweats, and for these, certain remedies are generally applicable. For local pain, blisters or issues sometimes afford great relief. The following plaster is strongly recommended by Dr. Paris, and is useful in relieving both the pain and cough:

Take of hard soap, one ounce; lead plaster, two drachms; muriate of ammonia, in powder, half a drachm.—Mix, and make a plaster. Spread it on leather, apply it to the chest immediately, and renew it once in twenty-four hours.

The following draught is much worthy of attention, as a palliative for the cough:

Take of extract of hemlock, extract of henbane, of each, five grains; mucilage of gum arabic, two drachms. Rub these well together, till they are thoroughly incorporated, then add, acetated liquor of ammonia, pure water, of each, half an ounce; syrup, one drachm. This makes a draught, to be taken every four hours.

The inhalation of ether, as before prescribed, is frequently employed with advantage, and, as a palliative of the cough, may be resorted to in every species of phthisis.*

In general, acids most effectually check the night perspirations. Thirty or forty drops of the diluted vitriolic acid may be given at bed-time, in a little water. If this fail, five or six grains of the compound powder of ipecacuanha may be taken, and it often perfectly succeeds.

To check the diarrhœa of the last stage, the patient may resort to extract of catechu with tincture of opium, as No. 36, page 104; or to the combination, No. 127, page 126, which is excellent. Small doses of the superacetate of lead are often

* The following is an instructive case of *tuberculous phthisis* cured, and will be interesting to my readers. It occurred at Paris, in the practice of M. Laennec. He says, "An English gentleman, aged thirty-six, detained in Paris as a prisoner of war, in September 1813, had an attack of spitting of blood, followed by a cough, at first dry, but in the course of a few weeks, accompanied by purulent sputa," (that is expectoration of pus or matter.) "To these symptoms were added a well-marked hectic, considerable difficulty of breathing, copious night sweats, emaciation, and great debility. The chest sounded well every where, except under the right clavicle, and in the arm-pit of the same side. The spitting of blood returned, in a slight degree, now and then, and in December he had diarrhœa, which was with difficulty checked by astringents. In the beginning of January he was so much reduced, that both M. Halle and Bayle agreed with me in opinion, that his death might be daily looked for. On the 15th of January, during a severe fit of coughing, and after bringing up some blood, he expectorated a solid mass, of the size of a filbert, which, on examination, I found to be evidently a tubercle in the second stage, surrounded, apparently, by a portion of the pulmonary tissue. This patient remained in the same degree of extreme emaciation and debility all January, being expected to die daily; but in the beginning of February, the perspiration and diarrhœa ceased spontaneously, the expectoration sensibly diminished, and the pulse, which had been constantly as high as 120, fell to 90. In a few days the appetite returned, the patient began to move about in his room, his emaciation became less, and against the end of the month, his convalescence was evident. In the beginning of April he was perfectly recovered; and his health has continued good ever since, without even the least cough, and without his being at all guarded in his climate or regimen. In 1818, this patient again consulted me for a different complaint, and I took the opportunity of examining his chest, by means of the stethoscope. The only thing I could detect, was the comparative indistinctness of respiration in the superior portion of the right lung, as low as the third rib. This part, however, sounded as well on percussion as the opposite side. From these circumstances, I am of opinion, that the excavation which contained the expectorated tubercle, must have been healed; and as the total absence of cough, difficulty of breathing, and expectoration, for so long a period, forbids the supposition of the existence of others in the lungs, I think we have a right to consider this patient as perfectly cured. In 1824, this gentleman was examined at Rome, by Dr. James Clarke, who recognized him as the subject of the case just detailed. I saw him also the same year, and found him precisely in the same state as in 1818." *Treat. on Diseases of the Chest*, p. 326. Dr. James Clarke testifies that this gentleman was living in 1827, and in good health.

useful in moderating the diarrhœa, and also the night sweats. In a case of chronic consumption which has been under my notice for some months past, and in which distressing diarrhœa has been a prominent symptom, the alkaline infusion of sarsaparilla has been of much service in checking the diarrhœa, and improving greatly the general condition of the patient.

Take of sarsaparilla root, three ounces; liquorice root, three drachms; lime-water, a quart. Let the roots digest in the lime-water eight hours, then strain, and take a quarter of a pint twice a day.

After describing the different varieties of pulmonary consumption, with their proper remedies, I would now introduce to the reader's notice the plan of treatment pursued by Dr. Stewart, of Scotland, in the present disease. This gentleman is a clergyman, (but was originally, I believe, bred to the profession of physic,) who from certain circumstances was led several years since, to pay great attention to the nature and treatment of consumption, and he has been not unfrequently successful in his endeavours to restore patients afflicted with that complaint, by whom he has been consulted. He looks upon it as a disease of debility, requiring, as I have always thought, mild tonic remedies, and considers that his plan of management is applicable to every species of the malady. I think his principles to be sound, and his practice deserving of confidence and imitation. Indeed, his principles of treatment are, according to my observation and experience, those only which can be adopted with a prospect of success, and the means he advises are highly proper. I would strongly advise travelling in an open carriage, or frequent change, in all cases where the patient's circumstances will admit of it, and there is nothing to contraindicate it, which is seldom the case. The influence of frequent change, and of constant exercise, is often surprisingly great in this disease, especially in *catarrhal* consumption, and that following the rupture of a blood-vessel in the lungs. My principles of management in this disease are strongly opposed to confinement in a warm room, what is usually called a regulated temperature, on ordinary occasions. Some cases may be benefited by it, but the majority are greatly injured.

"In treating breast complaints," says Dr. Stewart, "it has long been with me a maxim to overlook, comparatively, the idea of inflammation, except in the very first stage; and to aim gradually, prudently and steadily, at regaining a cool, braced, and properly seasoned state of of the constitution, as my first object. Many reasons incline me to suppose, that what in the progress of breast complaints is called an *inflammatory* state of the lungs, is not really so (I mean not a *real active* inflammation); and at any rate, I know from a good deal of experience, that it yields more readily to a different mode of treatment than that

commonly in use. I have likewise found, that the kind of practice which aims at overcoming this supposed inflammation, by lowering the strength in various ways, almost never fails to superinduce, in the same proportion, the most painful irritability of nerve; which, at length, counteracts the very end which is in view, by exposing the patient to a perpetual fever, from the most trifling causes. And I may add, that by relaxing what is already too much relaxed, making the constitution naturally very tender and susceptible of cold, it puts it beyond our power with all the precaution we can use, in a variable climate like ours, to prevent the frequent, and therefore dangerous, recurrence of some new irritation in the breast or throat."

In another communication on this subject, in which he alludes to the particular medicines and diet which were recommended in a certain case, and which conveys a correct idea of the kind of remedies he employs, this gentleman says:—

"I proposed that the patient should make a trial of the following things: Diet that is nourishing without being stimulating, as (besides milk and vegetables) an egg, a bit of fresh animal food, beef tea, broths, and particularly veal broth, jellies, and arrow root; and for drink, water, either pure, with sulphuric acid, or with a *tinge* of port wine, or occasionally spruce beer, ginger beer, or common small beer. As much exercise as possible, without fatigue, on a spring deal, within doors, and in a carriage in the open air. A regular system of sponging the body with water and vinegar (at first tepid, and afterwards cooled down to the natural temperature,) at least once a day, and following it always with a great deal of rubbing; and a blister issue on the breast.

"As to medicine, I recommend merely a cupful of cold infusion of bark, with some drops of sulphuric acid, twice a day, and, I think, generally some preparation of steel with a bitter. I am also partial to the use of Plummer's pill, in such cases as the present."

It now only remains for me to advert to air and exercise, a subject of importance at all times, and, in the commencement of the disease, of the first moment. All consumptive invalids require a mild and equable atmosphere, and the sooner this is resorted to the greater will be the probability of success. A great diversity of opinion has obtained among professional men in respect to the value and efficacy of the climates of different places, in consumptive disorders, but this has arisen from the same source as the interminable differences and contradictions visible on all subjects of knowledge, namely, ignorance of the subject, or at least insufficient information, amongst the majority. Of late years it has been fully investigated, and the most valuable *data* have been furnished, whereby we are enabled to form correct opinions, and the sum of what is known on this question will, therefore, I hope, be found in these pages.

It is certain that in Italy, France, Madeira, Lisbon, and other southern parts of Europe, consumption is very frequent among the native inhabitants; that, in the latter stages of the disease, a change to either of them generally accelerates rather than

retards a fatal termination in English patients; that the duration of the disease in Italy often does not exceed three or four months; and that the accommodations in almost all these places are bad. The Italian physicians acknowledge, that in a hundred deaths in that country there are, on an average, twenty-five by pulmonary consumption; and the distinguished M. Bayle, whose authority cannot be doubted, has asserted, that of five hundred patients who die in the Parisian hospitals, one hundred die of *phthisis*, and of the remaining four hundred, at least fifty are complicated with that malady.

Drs. Gourlay, Gordon, and Heineker, each of whom resided at Madeira, rather discourage us from sending persons thither, unless in the very beginning of the malady; the first observing, that whole families have at times been swept off there by consumption. Several object to the whole of Dauphiné, a great part of the South of France and North of Italy, and many of the neighbouring places, as being under the influence of cold winds from the mountains in the vicinity, and as destructive to foreigners labouring under *phthisis*. Drs. Southey, James Johnson, Sinclair, and Hennen, think unfavorably of Malta, Sicily, and other islands in the Mediterranean; and M. Portal has the same feeling with respect to the South of France.* It appears that the abrupt vicissitudes of the climate of the Mediterranean are extremely productive of pulmonary consumption among the European residents, and several able British practitioners state, that when it does approach, nothing but a retreat from its shores before the autumn sets in, can give a shadow of hope of safety to the patient, as has been proved by the recovery of many invalids sent home in the autumn, and the death of many who remained behind.—*Dr. J. Johnson on Tropical Climates, p.* 338. It is said that the deaths by consumption among the inhabitants of Malta, constitute nearly one-tenth of the whole mortality.

Nevertheless, an *early* change to some favorable spots in Italy and France will often be attended with striking benefit to the consumptive. *Pisa* and *Rome* are the best situations in Italy, and *Pau* and *Hyères* in the South of France. On the authority of Dr. James Clark, (see his useful book on *The Influence of Climates,*) we may state, that Rome is somewhat warmer in

* Montpelier was formerly a celebrated place for the resort of English patients labouring under consumption. Dr. Hawkins says, 1829, (*Medical Statistics*, page 31.) "The annual proportion of deaths at Montpelier, was greater thirty years ago, and is greater at present, than in London; and although the mortality of great cities is usually much larger than that of provinces or counties, yet the mortality of London is exactly the same at present as that of the department of the Herault, the southern and fertile, and long supposed most salubrious district of France, of which Montpelier is the capital. Finke, a German writer, who wrote on Medical Geography, in 1792, speaks with surprise and reprobation of the custom which then prevailed in England, of sending invalids to the South of France; and declares that the cutting winds of those quarters annually destroyed many of those wanderers in quest of a milder sky."

the winter than Pisa, and affords superior advantages to the invalid capable of taking exercise in the open air. To those, on the contrary, who cannot bear exposure, and who require an extremely sheltered and warm situation, the banks of the Arno in Pisa possess advantages, perhaps, over every other plain in Italy. The climate both of Nice and Naples is unfavorable. Pau is situated at the base of the Pyrennees; it is remarkable for the mildness of its spring, and is scarcely equalled, as a residence for the consumptive, by any place in France. Penzance is, during the winter months, three degrees *higher* than Pau, but five degrees *lower* in the spring. It is free from fogs, and possesses a dry soil. Hyères is the best situation in the South-east of France. It is a mild sheltered situation.

In the very earliest stages of consumption, Madeira offers a very eligible situation for the patient, both for a summer and winter residence. In the equability of its temperature throughout the year, in the progression of temperature during the day, in steadiness of temperature from day to day, and in the dryness of its climate, it excels the best situations in the South of Europe. Thus, while the winter there is twelve degrees warmer than in Italy and France, the summer months are five degrees *cooler;* and the mean difference of heat in successive months at Madeira is only about one half what it is in Italy. The vast difference which usually obtains in respect to the result of cases of consumption, in different stages, sent to Madeira, is satisfactorily shewn by Dr. Renton, (who resided there,) in some observations which he has published. He says, that between the years 1827 and 1830, *nineteen* patients labouring under confirmed consumption arrived in that Island, the whole of whom died, some speedily, and the rest at no distant period. In another statement, he remarks, that of *forty-seven* such advanced cases, sent to Madeira, thirty-two died within six months after their arrival; six died on a second winter's trial of the climate; six died after returning to England: what is the result of the remaining three cases is not known. On the contrary, of *thirty-three* cases of incipient consumption, which arrived during the same period, *twenty-three* returned home in good health; two remained in the island, one apparently well, the other considerably better; two died: the condition of the remaining six is not known.

But it may well be enquired, is there any necessity for our consumptive invalids to seek a suitable climate on a foreign shore? I think not; since at Undercliff, and the interior of the Isle of Wight, Penzance, Torquay, Clifton, Hastings, Brighton, and other places, will be found situations of the mildest and most sheltered description.

In the months of November, December, January, February and March, Undercliff, in the Isle of Wight, and Hastings, afford very favorable situations. The former is considered decidedly the most eligible, indeed, it is regarded by some as the most favorable situation in Great Britain for the consumptive. It is very sheltered, warm, and offers likewise a good summer climate. I like the situation of Newport very much, the chief town of the Isle of Wight. It lies in a valley, and is a very clean salubrious place. Carisbrooke, a village near, is also a good situation, in its sheltered parts, especially under Carisbrooke Castle. These parts appear to me very far superior to Hastings. During the months just mentioned, several places on the South Coast of Devon, as Salcombe, Torquay, Dawlish, Sidmouth, and Exmouth, offer an eligible retreat, *especially* Torquay. Penzance and Flushing are likewise excellent situations. Penzance possesses a remarkable equality in the distribution of its temperature, throughout the day and night, and throughout the year; in winter it is about four degrees warmer than London in the day, and about six degrees during the night. It is, however, a humid climate, and exposed to violent gales, and wants shelter from the northerly and easterly winds, so that I would advise those who go thither on account of the weakness of their chest, to leave it in February for Flushing, Torquay, or Undercliff.

Clifton is an eligible place for some consumptive persons. It is considered more bracing, drier, and less mild that the South-west Coast of Devon, and the Land's End, and therefore better adapted to the relaxed, languid habit, and to affections of the mucous membranes, accompanied with much secretion, while it is unsuitable to cases of a very irritable character, highly susceptible of augmented irritation from exposure to keen, dry winds, and where there is little secretion.

After March, many parts in the interior have a higher temperature than those just mentioned on the coast, except Undercliff, and consequently the patient may advantageously remove to Exeter, Honiton, Cheltenham, or Tunbridge Wells. In the summer, Leamington, Malvern, South-Wales, may properly be tried. Brighton is an eligible place in the autumn, especially to invalids of a debilitated, nervous habit.

Every consumptive person, indeed all invalids, should be careful to select a house with *a southern aspect*, wherever they reside. Attention to this point is, in most cases, of considerable moment.

Exercise, and frequent change of air, are very requisite in this disease, and will, in some instances, prove a powerful means of cure; for many patients, by constant change, (travelling as

much as possible in an open carriage,) have perfectly recovered, who always became worse when they remained a few days at a place.—*Dr. Foart Simmons on Pulmonary Consumption.* Where the circumstances of the individual will not allow of this perpetual change, as much exercise as possible, short of fatigue, should be substituted at home. Exercise on a spring deal board is one of the most preferable modes within doors, and in a carriage or on horseback abroad. Sydenham, one of the most sensible and discerning of physicians, used to recommend horse exercise as a remedy of great power in the cure of consumption, and when this malady occurs in a cachectic, impoverished habit, it is without doubt often of much service. Cases might easily be brought forward in which it proved an effectual means of recovery, after all hope of such an event had been abandoned. Dr. Baynard, by constant riding in the open air, recovered from a consumption, when every body gave him over as lost; and the author of "*The Best Method of Preserving Health,*" relates an instance where a patient was cured by riding, after being brought so low, that no recovery could be expected, either from medicine or even exercise. See also the value of exercise, (although of a different kind,) illustrated in the case of severe cough and curved spine, which I have related from Captain Clias's observations on Gymnastics, under *Spinal Curvature.*

Sydenham considered horse exercise not only proper in slight indispositions, accompanied with a frequent cough and wasting, but even in confirmed consumption, wherein looseness has supervened and is succeeded by night sweats, and I have no doubt of its utility in many such instances. Exercise, and particularly constant travelling, has a considerable and very sensible effect in restraining inordinate secretions in the body, so that those who have been a long time troubled with looseness, generally become costive in travelling, and such as have been harassed by habitual cough, almost always find it much ameliorated, and often entirely removed by this means.* It ought to be observed, however, that riding on horseback, in young persons of a plethoric habit, and high complexion, must be resorted to with caution, as it might otherwise tend to occasion or increase the symptoms of inflammation in the lungs.

It will be seen by what has been said above, that in order to treat consumption with a probability of success, it is absolutely necessary to attend to the stage and nature of the case, since what is useful in one species of the complaint, or at an early stage, may be useless or detrimental in a different species, or at a later period. Generally speaking, the treatment of the

* Interesting cases of consumption cured by exercise, will be found in my *Sure Methods of Improving Health* by regulating the diet and regimen.

florid or apostematous consumption, would seem for the most part to be diametrically opposite to that required in the pallid or tubercular kind, at least in the commencement.

In the consumption met with in mothers who have suckled their infants too long, and without enjoying sufficient nourishment, the Peruvian bark in free doses, combined with a nutritious diet, will be the best remedy. In emaciated and consumptive habits from a venereal cause, Sir William Fordyce praises the compound decoction of sarsaparilla as the greatest restorer of the appetite, flesh, colour, and strength, which he knew of; and, no doubt, it is, in such consumptive cases, a medicine of eminent utility.

OF CONVULSIONS.

Convulsions are violent and involuntary contractions of a part, or of the whole body, accompanied in some cases with rigidity and tension, but more frequently with strong and sudden agitations. There is frequently a gnashing of the teeth, and a forcible clenching of the hands. Differences occur in the character of the disease in different persons, and depend upon the peculiar disposition, habit, or stage of life, in which it makes its appearance.

The symptoms indicating the approach of convulsions are often overlooked; in children especially they will most frequently be found to have been preceded by feverish symptoms, by drowsiness, yawning, sighing, increased irritability, frequent crying and peevishness, impatience of sound and light, or by some derangement of the process of digestion, or some peculiarity of respiration.

The most frequent *causes* of convulsion consist in pressure on the brain, or in irritation situated in some very sensitive organ, as the stomach, bowels, or womb. It frequently follows severe fright, and the suppression of an accustomed discharge. In adults it may arise from a strong excitement of the passions, and from sympathy; and in infants, obscure inflammation of the brain is not an unfrequent cause, as is the case also with inflammation of the *glottis*.

Treatment. The treatment must apply to the paroxysm itself, and to the state of the constitution. In plethoric habits it will be advisable to let blood directly, and afterwards to administer brisk purgatives; following these up with antispasmodics and alteratives, of which the best are, the flowers, or acetate of zinc, quinine, ammoniate of copper, camphor, misletoe, and the cold bath, and the pill No. 98, or 99, page 120.

In weak and relaxed habits, blood-letting should be avoided,

and we may trust to the other remedies just mentioned. In such habits, the pills No. 102, 103, 104, or 106, page 122, are excellent.

The convulsions of infants generally depend upon some irritation in the brain, bowels, or stomach, or from teething, and are the most successfully treated by aperients or purgatives, and by the immediate use of a warm bath at about 98 or 100 degrees, giving, in the intervals, some mild aperient occasionally, with plenty of free air and exercise, great attention being, at the same time, paid to diet. Two grains of calomel and five of rhubarb, form one of the best purgatives for exhibition during the fit, and to prevent its recurrence, the powder No. 111, page 108, will be found very useful. If the stools are of an unhealthy colour, this powder should be given twice or thrice a week, till they recover a healthy appearance, and the little patient looks well.

It is not advisable to abstract blood in the convulsions of infants or children, unless there should exist a full habit of body, and signs of an overloaded state of the vessels of the brain, or of inflammation in the brain, the principal of which signs are—warm, tumid scalp and face, flushed countenance, the fore part of the head *(fontanelle)* elevated and tense, eyes suffused with blood, quick, full, hard pulse, or one that is slow and oppressed, the veins of the head and neck large and dark. In this case, leeches may be advantageously applied behind the ears, or the jugular vein may be punctured; but in general the means above advised are the most proper, to which we may add the free sprinkling of cold water over the face and head, (which is one of the most powerful stimulants known,) the application of smelling salts to the nostrils, and the rubbing the hands and feet well with eau de Cologne, or any mild stimulant. Purgatives cannot always be given immediately, from the children not having the power of swallowing, but the glyster No. 8, page 97, should be exhibited as speedily as possible. Should these ingredients not be easily procured, the glyster may consist of some warm water, salt, and oil, or melted butter, which may be thrown up with a common syringe, if the bladder and pipe are not at hand.

A great many children die in convulsions, the consequence of excessive feeding, and improper confinement within doors; and it will be well for mothers, whose infants are subject to convulsive fits, to be attentive to the quantity and quality of their food, and to their having sufficient exercise. I know a lady of rank, who has lost as many as three or four infants, (it may be more,) in this way, and from this cause alone. The parents are both healthy, and the children were all full-grown,

strong, and healthy at the birth, and appeared so for some months after; but they invariably died at about the age of twelve or sixteen months, evidently from improper treatment, though the too fond mother could never conceive the cause. The nurse and mother joined in stuffing them throughout the day, and thinking that they would perish if left without food during the night, it was a regular practice to take them up and feed them four times during that period!*

Dr. Underwood correctly remarks, that when infantile convulsions prove suddenly fatal, they are commonly symptomatic, and are occasioned much oftener than is suspected by overfeeding. When, therefore, an infant falls suddenly into a convulsion very soon after sucking or feeding, (more especially if on any thing actually improper,) and the bowels have been some days in an orderly state, we may reasonably presume the irritation to be in the stomach; and, in such instances, the fittest and most expeditious means of recovery consists in the prompt administration of an emetic, for as soon as the offending material is discharged, the child almost instantly begins to recover. As an emetic, three or four grains of sulphate of zinc dissolved in water, and given directly, will be found the most speedy in its operation, but as no time is to be lost in bad cases, and it will require some minutes at least to procure this medicine, the nurse ought to endeavour to provoke immediate vomiting, by irritating the back part of the throat with the finger or a feather, the child being, at the same time, supported by a hand placed under the stomach and belly, in which position it will be made to vomit more readily than in any other.

An examination of the state of the gums should always be made when convulsions take place during teething, and if they are even full, they ought to be scarified, but if they are inflamed, the scarification should be very free, so as not only to take away some blood from the part inflamed, but also to remove the whole tension of the gums and of the membrane which covers the tooth.†

* "I have known some of the largest and finest infants I have ever seen, die suddenly in the month, immediately after the nurse had boasted of their having eaten *three boats full of victuals!!!*" *Dr. Underwood on Children's Diseases, p.* 246.

† "This membrane, under inflammation, becomes extremely sensible to pain, and being stretched upon the tooth, requires to be entirely set at liberty. When convulsions occur in teething, the lenity of the surgeon who omits to destroy the inflamed gum sufficiently with the knife, is ill-judged, and is in effect, the greatest cruelty to the child. The writer has seen many cases in which convulsions have ceased on scarifying the gums extensively, after slight incisions of them had failed to produce any advantage. The late Mr. John Hunter, in his work on the subject of the teeth, mentions, that he had scarified the gums of a child ten times, with manifest advantage each time, and a diminution of the symptoms which had arisen from the advancement of the tooth to the surface." *Dr. John Clarke on the Diseases of Children, p.* 104. This is an extract from a very able work of a physician of great discernment, and who is deservedly a high authority in practical medicine.

There is a peculiar kind of convulsions found in infants and young children, connected with attacks of sonorous inspiration and a crowing sound, which merits particular attention. It consists in a peculiar mode of inspiration, which it is difficult accurately to describe: the convulsive affection occurs by fits, with longer or shorter intervals between them, and of longer or shorter duration in different cases. The child having had no apparent warning, is suddenly seized with a spasmodic inspiration, consisting of distinct attempts to fill the chest, between each of which a squeaking noise is often made; the eyes stare, and the child is evidently in great distress; the face and the extremities, if the fit continues long, become purple, the head is thrown backward, and the spine is often bent forwards; at length a strong expiration takes place, a fit of crying generally succeeds, and the child, evidently much exhausted, often falls asleep. These paroxysms usually occur many times in the day, and are often brought on by straining, by exercise, and by fretting, and sometimes they come on from no apparent cause. The child may die in one of these attacks.

Accompanying the above symptoms, there is sometimes found a bending of the toes downwards, clenching of the fists, and the insertion of the thumbs into the palms of the hands, not only during the paroxysm, but at other times.

The attacks commonly take place after a full meal, and often occur immediately upon waking from sleep, though before the time of waking the child had been lying in a most tranquil state. This affection is sometimes called *chronic croup*, but it is totally different from croup, and seems to be owing to *a spasm of the glottis*, or top of the windpipe.

Dr. John Cheyne says, in his work on water in the head, that the distinctive mark of this disease is "*a crowing inspiration with purple complexion, not followed by cough.* In some cases this affection is attended not merely with a permanent clenching of the hand upon the thumb, but also with a very remarkable fixed spasm of the toes, particularly the great toe, which gives a look of swelled deformity to the upper part of the foot."

The *treatment* of this *spasm of the glottis* mainly consists in the administration of warm purgatives, as No. 121, page 125, with two or three grains of mercury with chalk, at bed-time,—a well regulated diet,—and pure air. A change into a very pure country air is of eminent service. The room the child inhabits should be large, and freely ventilated; and sometimes a little carbonate of ammonia, as in No. 79, page 115, will be found serviceable. When the head is evidently affected, cupping-glasses behind the ears are required, but if the cheeks of

the child are pale and flabby, the abstraction of blood must be avoided.*

In Puerperal Convulsions,

Or the convulsions occurring in child-bed, the immediate cause is a peculiar irritation of the nervous system, as participating in the irritation of the womb; and hence it seems obvious, that the radical and specific cure is a termination of the labour. The first step is to open a vein and bleed copiously, from a large orifice, till the patient faints; the hair should be immediately removed from the head, and lotions of cold water, or pounded ice, be applied all over it by wetted napkins, changed for others as soon as they acquire the least degree of warmth. At the same time a purgative injection, as No. 8, page 97, should be thrown up the rectum, which may be followed by two grains of calomel given by the mouth, with the purgative draught, No. 28, page 103.

If the mouth of the womb should be rigid, and but little dilated at the commencement of the convulsions, this depleting plan generally renders it lax and dilatable, when the midwife should without delay introduce the hand, slowly dilate the mouth of the womb, break the membranes, lay hold of the child's feet, and deliver by turning. This should be done although there be no distinct labour-pains. Some medical men, however, object to delivery by the hand in puerperal convulsions, and, after resorting to the depleting plan above described, recommend that the delivery of the child should be left almost entirely to the natural efforts of the mother. But it is my opinion, that the woman should be delivered as soon as we can possibly do it without violence, and this mode of proceeding seems countenanced by the majority of obstetric practitioners.

OF CORNS.

In their first formation, corns are the production of the outer skin alone, but by gradually thickening they come at length to be connected with the true skin beneath, and, in some instances, even to proceed to the depth of the subjacent muscles. They are entirely owing to repeated and long continued pressure.

The cure consists in removing pressure from the part, by

* "By giving the child the advantage of a pure air, and of a succession of good nurses, during the whole period of dentition, more good has appeared to be done than by all other measures put together. Dr. Marsh remarks, that all his cases occurred in children of a scrofulous constitution; a fact which leads him to insist still more strongly on the importance of a pure atmosphere, healthy nutriment and tonics." *Cyclopædia of Pract. Medicine*, vol. ii. p. 350.

wearing very easy shoes, and in cutting or paring the excrescence down as close as possible, without giving pain, after soaking them a little in warm water, when some stimulating preparation should be applied over it. The best applications are the juice of house-leek, or purslane, or the compound ammoniac plaister, No. 132, page 128. Mr. Samuel Cooper, in his invaluable Surgical Dictionary, recommends the plaister, No. 139, page 130, as infallible.

OF COSTIVENESS.

Habitual constipation is met with in two different descriptions of persons, that is, in those who are of a robust habit, with a hearty appetite and strong digestive powers; and in others who are of infirm or delicate health, with moderate or deficient appetite, and weak digestion. The motions of the former when discharged are compact and voluminous; those of the latter, hard, slender, and lumpy.

The first kind of costiveness seems to arise from an excess of action in the absorbent, or other vessels of the bowels, and from a free use of heating, astringent food, which such persons generally indulge in; while the other description depends upon weakness of the intestines, and a consequent sluggishness in the peristaltic motion. Both kinds are very much increased by all sorts of astringent food.

TREATMENT. This complaint, when occurring in the strong and robust, should be treated with occasional saline or oleaginous aperients, as No. 74, page 114, or a little castor oil, the patient avoiding violent exercise or exertion of any kind, and taking the alterative pill, No. 98, page 119, every other night, for a month or two.

When it is met with in the delicate and weakly, the aperients employed should be warm, aromatic, and very mild in their operation. The form of pill is by far the best for such persons, and either No. 97, 100, or 101, at page 120, may be resorted to with advantage. Of laxative medicines, two of the best are sulphur, and the common Seidlitz powders. About a tea-spoonful of sulphur, and something less than half a tea-spoonful of cream of tartar, mixed with a little treacle, is a proper dose. The Seidlitz powders are very valuable in this complaint, because they operate in an unusually mild manner and correct acidity in the stomach, without increasing the tendency to costiveness after their operation is over. The *Beaume de Vie* is a good medicine.

The powder of ipecacuanha is often of great service in the present disorder, and scarcely any medicine is so appropriate,

since it is peculiarly well calculated to stimulate the digestive organs, and relieve the weakness upon which the constipation is generally dependent, at the same time that it relaxes the bowels and skin. I know no case in which it will fail to be beneficial, while in numerous instances, even when of long standing, it must prove of essential utility. A grain of the best ipecacuanha powder may be made into a pill with three grains of Castile soap, and taken before each meal; or, one pill may be taken before dinner, and two every night at bed-time. This remedy has considerable effect in removing a dry, harsh state of the skin, and in curing cutaneous eruptions.

I have reason to think the *alkaline tincture of rhubarb* an excellent medicine in costiveness. It is made by infusing an ounce of rhubarb, grossly powdered, in a quart of the alkaline solution, (page 2,) which, after standing for a day or two, and being well shaken together several times during that period, is fit for use, when filtered or poured off clear. One or two tea-spoonfuls of this tincture may be taken every night at bed-time, in a tea-cupful of thin gruel, barley-water, or fresh small beer. Mr. Brandish says, that it has been very effectual in his hands in removing habitual costiveness.

Since the publication of the first edition of this work, I have found it of eminent utility in regulating the bowels of a gentleman, residing in Hampshire, who has long been most severely harassed by costiveness, flatulence, pains in the lower belly, and other painful feelings dependent on a want of proper tone and action in the intestines. He used double the quantity of rhubarb ordered above.

In all cases of constipation, purgatives must be avoided, for though they relieve the bowels for the time, their activity invariably induces still greater weakness in the intestinal canal, which occasions more obstinate costiveness, and thus in reality aggravates the evil they were intended to remove.

In point of diet, great attention should be paid in avoiding all articles that are astringent, and in indulging moderately in those which are relaxing. Generally speaking, the patient will find that excess of diet will increase the costive habit, by disordering and still further weakening the bowels. The constant use of brown instead of white bread is a measure that will frequently overcome this habit, when aperient medicine is resorted to with only partial and unsatisfactory benefit; and if, after a time, it should lose its effect, it may be alternated with bread made of one-third or one-half rye flour, mixed with the wheaten flour. Barley bread also has considerable effect in promoting a soluble state of the bowels, and so has barley-meal porridge. The latter may be taken either with or without milk. It is

easily digested, and very wholesome. The self-acting clyster machine will likewise be a very useful instrument in such cases for occasional use, and a little soap dissolved in warm water is, perhaps, the best fluid that can be thrown up. Active exercise in the open air should be freely employed; with daily friction over the region of the stomach and bowels. The hand alone may be used, or with either of the liniments at page 106.

A constipated habit of body is a fruitful source of many complaints, as piles, fistula, strictures of the rectum, general debility, lowness of spirits, head-aches, and various other evils. The bowels are organs so sensible and important, that it should never be forgotten, that habitual constipation necessarily produces disorder, and disorder leads to disease; and the correction of this habit, therefore, deserves far more attention from the subjects of it than it commonly obtains. The most pleasant and effectual way of correcting it is by diet, friction, exercise, and the occasional use of a little mild medicine. It is an unwise and unsatisfactory plan for the constipated to trust chiefly or altogether to the frequent use of aperient medicine; this now and then interposed is sometimes of great service, but the relief gained by diet, friction, and the occasional employment of the clyster machine, is more certain, permanent, and beneficial. I have known many delicate persons who have suffered much for a long period from general weakness, lowness of spirits, frequent head-aches, alternated occasionally with violent bilious attacks; and who, when they had persevered in the above means of obviating a confined and disordered state of the bowels, have gained a surprising and lasting benefit, so much so as to be, in some measure, new creatures with regard to general health, and comfortable feeling. When there is any severe local complaint, the proper regulation of the bowels is a point of the first importance.

If the state of the stomach does not forbid it, a little ripe wholesome fruit, as baked apples or pears, &c. should be taken daily.

When the bowels are so obstinately confined as to resist the action of strong purgatives, and from the long continuance of the constipation, to excite alarm, other means must be immediately resorted to. Dr. Willan, who is justly considered a high authority in practical medicine, has some valuable remarks on this subject in his reports on the diseases of London, under the head of *Constipatio*, which I would here insert.

"By the term constipatio," says he, "is expressed not merely costiveness, but a stoppage of the bowels from some original or local affection, as rupture, scirrhosity, or stricture of some portion of the intestine, narrowing and often obliterating the canal. Tumours and concretions, external to the bowels, have occasionally the same effect. Strictures

take place in different situations; but they occur so frequently about the sigmoid flexure of the intestine colon, near its termination in the rectum (or last gut), that this part should be carefully examined in every case of a total obstruction of the bowels. The insertion of an unyielding tallow candle, though often practised, has been generally found painful and inefficacious. It is requisite for the purpose to employ a bougie thirteen inches long, and of a proportionate strength; which should also be directed with a nice hand, by a skilful surgeon. I lately saw a lady thus relieved, who had been twenty-six days without any evacuation from the bowels, and who seemed nearly exhausted by violence of pain and distension of the abdomen, incessant vomiting, hiccough, cold sweats, &c. It is remarkable how long patients suffer under these distressing circumstances. In one instance, the time was twenty-nine days, in another patient, thirty-three days. As the latter recovered, after enduring every torture such a disorder could inflict, practitioners may be encouraged to persevere steadily in their attentions, and to retain some hopes even in the greatest extremity.

"When the obstacle is concluded to be somewhere in the great intestines, if active purgative and stimulant clysters fail in their first application, we should be cautious of persisting in the use of such irritating remedies, which often give unnecessary pain, and rather tend to aggravate the disorder."

If the bougie fails in affording relief, cold water should be freely and suddenly dashed over the patient's belly and thighs; and where the habit of body is strong and plethoric, bleeding from the arm will often be advisable. One, two, or three drops of croton oil is sometimes a valuable purgative in cases of obstinate costiveness.

Sometimes constipation is occasioned by a stricture, or narrowing of the rectum, or last intestine, and then it can never be removed but by removing this constriction, in the manner pointed out under *Stricture*. Many persons so circumstanced are harassed for years by costiveness, and its numerous painful consequences, without at any time gaining more than very partial relief, because their chief complaint, which is the contraction now referred to, has been altogether overlooked.

It is worthy of particular notice, that when a total obstruction of the bowels is accompanied with severe pain, and a hard quick pulse, it is generally dependent on inflammation, and must be treated accordingly by copious blood-letting, calomel and opium combined, cold applications, &c. Here the obstinate constipation can be removed only by removing the inflammation, and although this is so clear a case, yet I have known, in several instances, respectable physicians dwell so entirely on the obstruction, to the neglect of the inflammation, which was its only cause, that the patients perished for want of recourse to the proper measures. I would, therefore, warn the reader against this fatal, and not very unfrequent, mistake.

OF COUGH.

There are four sorts of cough clearly marked in medical practice by characteristic symptoms, viz.—

1. The *common mucous*, or recent cough.
2. The *chronic mucous*, or long-standing cough.
3. The *dry or latent* cough.
4. The *symptomatic* cough.

The seat of all these coughs is in the chest, and the parts principally affected are the windpipe and its terminations, called *bronchia*. It is the internal or mucous membrane of the *bronchia* which is chiefly, and very often exclusively, affected in cough, whatever may be its distinctive character, a redness and thickening of that membrane being the chief visible appearances.

1. The *common mucous*, or *recent* cough, is well known, being that which is usually connected with taking cold, or which arises from other causes, and lasts but a few days. Most persons are affected with it, in a greater or less degree, every year. A redness, more or less marked, and at most a slight thickening of the internal membrane of the bronchia, are the only traces which this disease leaves in the affected organs; if we except a quantity of phlegm resembling that expectorated. The redness and swelling very rarely occupy the whole bronchial membrane, even of one lung. When the contrary is the case, the disease is very severe, and accompanied by a violent fever. It is then called *acute* mucous cough, and is attended with inflammatory symptoms. Most commonly there is congestion only in certain parts of the membrane, in one or both lungs, even when there is much fever and expectoration.

The symptoms are well known, and are described under *Catarrh*.

2. In the *chronic mucous* cough, the bronchia presents nearly the same appearances as the preceding; the membrane is more frequently of a violet colour, and irregularly marked here and there with spots of a paler or darker hue, while in the common or acute cough, the red is brighter, and verging more towards purple or brown. The *chronic* cough is sometimes accompanied with a general or partial dilatation of the bronchia.

Generally, the expectoration is less glutinous, and more opaque than in the recent cough, and sometimes it is nearly puriform, that is, like *pus*, or matter. Occasionally it is of a dirty greyish or greenish hue, from an admixture of the black pulmonary matter.* It is usually inodorous, but sometimes

* There is a black matter deposited in great abundance in particular parts of the cellular membrane of the lungs, and it is from this substance, which is not a diseased

more or less fetid, and now and then assumes the smell as well as the other physical qualities of the different kinds of pus; having at one time the smell of good pus from a recent wound; at another, the strong odour of the contents of a large abscess, and occasionally approaching the gangrenous fetor. The quantity of the expectoration is variable; not unfrequently it amounts to one or two pounds in the course of twenty-four hours. It is increased on every fresh attack of cold.

This disease is very common in old persons, and is, indeed, the most frequent infirmity of age. It is not very rare in childhood, but seldom begins in the middle period of life. The repulsion of cutaneous eruptions, and the suppression of an habitual discharge, have frequently a decided influence in developing this disorder.

In advanced life, and particularly in those whose constitutions have been debilitated by excesses, or by sedentary habits, a chronic cough is found which is called the *pituitous* cough, from the expectoration being mostly colourless, transparent, ropy, frothy on the surface, and underneath like white of egg diluted with water. This is common in gouty subjects in whom the gout has lost its regular form, and become less strongly marked. It usually comes on by slow degrees, and when this pituitous discharge is once fully established, it becomes frequently intermittent, and sometimes with considerable regularity. There are generally two fits of cough and expectoration in the twenty-four hours, the one in waking from sleep, the other in the evening; but not unfrequently the fits immediately follow the patient's meals. The quantity of fluid expectoration is always very great; some patients discharge in the course of one or two hours from two to three pounds.* Difficulty of breathing always accompanies the attack, and when the disease has existed some time, the countenance assumes a pale blueish tint, and the body becomes emaciated. In this state, the complaint may exist a great many years, but as age advances, the

secretion, since it is always found in adult lungs, that the small black dots sometimes observed in the pearly sputa of the dry cough are derived; as also the blackish or grey colour of certain kinds of mucous expectoration, and the greyish tint occasionally exhibited by the matter of pulmonary abscess, which resembles a mixture of pus and ashes. This black matter is not found in the lungs of young children. In adults and elderly persons it is more or less abundant; while in very old subjects it, perhaps, is found in less quantity.

* M. Laennec says, (*Treat. on Diseases of the Chest*, page 85,) "I am acquainted with two old gentlemen, one of whom, upwards of seventy, has expectorated during the last ten or twelve years, in two daily paroxysms, about four pounds of a colourless, ropy, and frothy fluid. The other brings up every morning by gentle spontaneous vomitings, repeated at short intervals, during several hours, from three to six pounds of a liquid exactly like white of egg, mixed with a third part of water. This gentleman is upwards of sixty, enjoys tolerable health, and walks several hours every day. Some patients, however, die of exhaustion within a much shorter period, and from a much smaller discharge.

fits become longer and more frequent, the difficulty of breathing becomes habitual, and the disorder then acquires the name of *Asthma.*

3. The *dry* or *latent* cough designates those slight inflammations of the *bronchia* which are attended with little or no expectoration. This effect is extremely common in the chronic state; it is frequent in gouty and hypochondriacal subjects, in persons affected with cutaneous eruptions, and in those whose constitutions are broken down by excesses of any kind. In such instances, traces of a slight habitual thickening or congestion are found in some part or other of the mucous membrane of the lungs; and this swelling is particularly remarkable in the smaller branches, which are, indeed, sometimes almost completely obstructed by it.

This disorder when existing in a moderate degree, frequently remains altogether latent for a series of years,—the subjects of it being no further conscious of its presence than by observing that they are shorter breathed than others, when they ascend an elevation or attempt to run. When the bronchial swelling becomes more extended, difficulty of breathing is then experienced, even in a state of quietude, and particularly after meals; and this state of oppression is referred by some patients to one side only. Frequently the patient expectorates every morning a small portion of tough mucus of a pearl grey colour. The *dry* cough often eventually terminates in the production of asthma, and emphysema of the lungs.*

4. The *symptomatic* cough is that, the chief cause of which is found in some affections of the stomach, bowels, liver, kidneys, or other distant part; hence the terms *stomach* and *liver cough.* It assumes the general symptoms of chronic mucous cough, and it is worthy of particular notice, that it is extremely rare for a symptomatic or sympathetic cough to establish itself without there having previously existed a dry or *latent* cough, that is, a thickening or congestion in the mucous membrane of the bronchia. Under the existence of this, disorder of the digestive organs, &c. is very likely to develope troublesome cough.

TREATMENT. 1. *The common recent cough* is often a consequence of cold or torpid feet, and will be best relieved by mild mucilaginous medicines, and those means which gently determine to the surface of the body. Two or three grains of the compound powder of ipecacuanha, taken as a pill twice or

* It is well ascertained that the tumefaction of the bronchial membrane to which the name of *dry* cough or catarrh is given, is constantly present during the whole course of continued fevers. Hence the crisis by expectoration is common in continued fevers; and those *fevers* are called *catarrhal*, in which the dry cough or catarrh early unmasks itself.

thrice a day, is a very useful medicine, and so is the following:

Take of honey, four ounces; treacle, four ounces; best vinegar, five ounces.—Mix these together, and simmer them, in a common pipkin, over a slow fire for fifteen minutes. When the mixture is cold, add a dessert-spoonful of paregoric elixir, (or the like quantity of ipecacuanha wine,) and let a table-spoonful be taken three, four, or five times in the twenty-four hours.

This is particularly useful in the coughs of children, as it has a very pleasant taste. The dose for children under twelve years of age is two tea-spoonfuls.

Either of the forms, No. 47, 48, or 49, page 107, are also proper, and the bowels should be kept gently open. If pain in the chest and fever attend the cough, the treatment will be that laid down for catarrh at page 287.

When recent cough becomes protracted, and there seems reason to apprehend its becoming chronic, or if it be supposed to be grafted on a latent tuberculous state of the lungs,—in either of these cases a perpetual blister to the *arm* (or to the *thigh* in females) may be useful.

An emetic of fifteen grains of ipecacuanha is very useful where the disease is complicated with a bilious affection. The efficacy of emetics in the cure of recent cough is much greater in the case of children than in that of adults. To the former, an emetic of ipecacuanha may be given every other day for a week or more, and the practice affords a good guard against the catarrhs of early infancy degenerating into the hooping-cough.

2. Of the *chronic mucous cough*, debility, either general or local, is almost invariably a concomitant, and it is, therefore, a leading circumstance in the treatment, to avoid every thing which tends to weaken, and to make use of those means which have the power of strengthening the general habit as well as the pulmonary organs. Tonics, with the warmer and more pungent expectorants, are chiefly indicated; such are the forms No. 102, 105, or 106, page 121. The following are likewise very efficacious.

Take of carbonate of iron, twenty grains; myrrh, in powder, one drachm; ginger, in powder, twenty grains; mucilage of gum arabic, a sufficient quantity to make the whole into a mass, to be divided into twenty pills. Two to be taken twice a day.

Take of myrrh, in powder, two drachms; prepared ammonia, in powder, one drachm and a half.—Mix, and with a sufficient quantity of extract of gentian, make into forty pills, two or three to be taken twice or thrice a day.

It must be admitted, that there are many cases, in which the long continuance of the disease, and the age and debility of the patients, afford slight grounds for hope of a cure, even from

an active mode of treatment; but there are others, on the contrary, in which the practitioner too soon despairs of success, and consequently renounces the use of means which are really efficacious. Among these means, there is no one more frequently useful than emetics of ipecacuanha, repeated according to the patient's strength, and his power of supporting their action. M. Laennec says, "I have cured, in this way, coughs of long standing in old persons, and still more in adults and children. In the case of an old lady of eighty-five, who had laboured under a chronic cough for eighteen months, with an expectoration amounting to two pounds daily, I prescribed fifteen emetics in one month, and with complete success, as the patient lived eight years afterwards free from complaint." After the use of emetics, mild tonics should be administered.

Tar water was at one time a famous remedy in old coughs, and is sometimes very useful. The tar vapour is also an appropriate means, and seems to be more beneficial here, than in any other kind of cough.* For the manner of using it see page 322.

The balsams, especially the balsam of copaiba, are frequently very beneficial, when the stomach will bear them well; but they should not be persisted in if the stomach is uneasy under their use.

In the *pituitous* variety, the same means are applicable as to the more ordinary form of chronic cough, but blisters applied first on the chest, and subsequently on the extremities, are particularly indicated. Mild preparations of opium, such as paregoric elixir, in small doses, and also hemlock and henbane, are often useful in the pituitous cough; much more so than in the common chronic cough.

3. In the *dry* or *latent* cough, the indication seems to be, to relieve the vascular congestion which exists habitually in the mucous membrane of the bronchia, and to facilitate the expectoration. The most useful medicines here are opium, repeated in very small doses, as the syrup of poppies, in doses of a tea-spoonful, three or four times a day, or two grains of compound ipecacuanha powder, in a pill, thrice a day; with very mild alteratives, as the pill No. 98, page 119, every night, or every second night, for two months, and a tea-spoonful of the *alkaline solution*, once or twice a day, in water. The carbonate of ammonia is a valuable remedy here. Cold bathing is likewise good.

* Dr. James Forbes states, in the *Medical and Physical Journal for October* 1822, that he had tried the tar vapour in chronic cough in one of the military hospitals, and that of thirty-two cases, it had produced a cure in eight, an improvement in six, no effect in eighteen, and a bad effect in none; and this, I think, may be considered as a fair average of its probable effects in this complaint.

4. The treatment pointed out for *indigestion*, and under *chronic disease in general*, is that proper for *symptomatic cough*. In this kind, the patient seldom coughs when he draws in his breath fully, which he commonly does, when the cough is owing to a fault in the chest. The symptomatic cough is to be cured only by those means which invigorate and enliven, such as active exercise in the open air, especially on horseback, with frequent changes of scene, regulation of the bowels, and tonic medicines. The prescriptions, No. 102, 103, 104, 105, or 106, page 121, will be found useful. When the flowers of zinc were in the height of their popularity some years since, they were supposed to be an unfailing remedy for nervous cough, and Dr. Percival, of Manchester, has given numerous examples of their complete success. *The stomach cough* will be known by its being attended with a weak state of that viscus, and many of the usual symptoms of disorder in the digestive organs. Generally, there will be a confined state of the bowels, acrid eructations, and a deficient or faulty biliary secretion; and the alterative pill, No. 98, or, which is usually still better, No. 99, page 120, every other night, or three grains of mercurial pill every night, combined with the remedies just described, will be of great service. An occasional emetic of ipecacuanha powder is very advisable. The pills of hemlock and ipecacuanha mentioned at the end of *Hooping Cough*, have been in some cases of signal service. I have heard of one person, whom I never saw, who was cured by them, having taken the prescription from a former edition of this book, and who appeared to be in an advanced stage of consumption.

Every person should pay attention to a cough, and especially those who are delicate, and have weak lungs, as a neglected cough is frequently followed by troublesome and dangerous consequences. Those who are much subject to coughs ought to avoid the night air, crowded cities, and elevated spots of ground; and they should sponge the whole body every morning with salt and water. The embrocation, No. 45, page 106, rubbed on the chest, is an eligible remedy in the coughs of infants.

OF COW-POX.

The genuine inoculated cow-pox is distinguished by the following signs: the vesicle produced is single and confined to the puncture; cellular; blueish-brown in the middle; fluid, transparent, and colourless to the last; concreting into a hard, dark coloured scab after the twelfth day. If the fluid be not transparent, it forms a decisive proof either that it is spurious or imperfect.

The general progress of the disease is as follows:—The puncture disappears soon after the insertion of the lancet; but on the third day a minute inflamed spot becomes visible. This gradually increases in size, hardens, and produces a small circular tumour, slightly elevated above the level of the skin. About the sixth day, the centre of the tumour shews a discoloured speck formed by the secretion of a minute quantity of fluid; the speck augments in size, and becomes a manifest vesicle, which continues to fill and to be distended till the tenth day; at which time, it displays in perfection the peculiar features that distinguish it from the inoculated small-pox pustule. Its shape is circular, sometimes a little oval; but the margin is always well turned, and never rough or jagged: the centre dips instead of pointing, and is less elevated than the circumference.

In inoculating for the vaccine disease, the following circumstances should be carefully attended to.

1st. That the fluid should be taken before the ninth day.

2dly. That it should be perfectly transparent.

3dly. That if not used immediately, it should be dried gradually, and thoroughly, before it is laid by for future use.

4thly. That the punctures should be made as superficially as possible, and no more than one in each arm.*

5thly. That any excess of inflammation that may arise should be repressed by the application of cold water, or a cold lotion, as No. 68, page 113.

It is rare that any medical treatment is necessary. If the constitutional indisposition should be severe or troublesome, a dose or two of aperient medicine, as No. 73, page 114, is all that will be required.

The value of cow-pox as a safe-guard against small-pox, is now pretty certainly ascertained, and is generally admitted by professional men. Cases of the latter disease occurring after vaccination have unquestionably happened, and will continue to happen, as more or less negligence will always be evinced by some in selecting the genuine virus, and in attending to the regular progress of the vesicle; besides which, the vaccine fluid does not prove a permanent preservative in a few particular habits, of the nature of which, however, we know nothing.

* This was the advice originally given, but it seems now to be the general impression, that two or three punctures or more are preferable. At the small-pox hospital in London, they are in the habit of making several punctures, at least in one arm.

OF CRAMP OR SPASM.

The cramp is a sudden and rigid contraction of one or more muscles of the body, mostly of the stomach and limbs, which is vehemently painful, but of short duration.

The parts chiefly attacked with cramp are the calves of the legs, the neck, and the stomach. When the muscles are affected, they feel as though they were puckered and drawn to a point, or seem to be writhed and twisted into a hard knot; the pain is agonizing, and frequently produces a violent perspiration. If the stomach be the affected organ, the midriff associates in the constriction, and the breathing is short and distressing.

The usual *causes* are sudden exposure to cold, drinking cold liquids during great heat and perspiration, eating cold indigestible fruits, overstretching the muscles of the limbs, and the excitement of transferred gout. Cold night air is a common cause of cramp, and it is a still more frequent attendant upon swimming.

TREATMENT. When it occurs in the limbs, warm friction with the naked hand, or with a stimulating liniment, as No. 45, page 106, will generally be found to succeed in removing it.

Where the stomach is affected, brandy, ether, laudanum, or tincture of ginger, afford the speediest means of cure. The following draught may be taken with great advantage.

> Take of laudanum, forty or fifty drops; tincture of ginger, two drachms; syrup of poppies, one drachm; cinnamon or mint water, one ounce.—Mix for a draught. To be repeated in an hour, if necessary.

In severe cases, it will be advisable at the same time, to apply hot flannels, either alone, or moistened with the liniment, No. 46, page 106; and sometimes it may be found necessary to apply mustard poultices to the feet, which is often of great advantage. In the intervals, the patient should be particularly attentive to his diet, and to the regulation of the bowels, instructions for which will be found under the heads of *Indigestion* and *Costiveness*. When the cause is constitutional, warm tonics, as No. 102, 104, or 106, page 122, constant exercise, and a free state of the bowels, are the best remedies. Those who are frequently attacked with this kind of pain, will derive great advantage from the use of the means pointed out under *Pain in the Stomach*; but since in such cases the chief cause exists in a derangement of the general health, the most valuable information will be found under *Chronic Disease in general*, and *Indigestion*, and the best remedies will be those that most effectually tend to enliven, comfort, and invigorate the patient.

In alarming cramp of the stomach, from transferred gout, a large dose of brandy and opium, with mustard cataplasms to the feet, will frequently save the patient from impending death.

OF CROUP.

The croup is a violent and peculiar inflammation of the membrane lining the windpipe, and especially the *bronchia*, producing a secretion of an uncommon kind, which assumes a membranous form, and lines the windpipe through a part, or even the whole of its course. It is attended with a peculiar ringing sound of the voice, breathing permanently laborious and suffocative, and fever. The essence of the disease consists in the secretion of this viscid and concrete lining, which is perpetually endangering suffocation.

Young children are chiefly subject to its attack, and those who have once had it are more susceptible of it than before, though the susceptibility gradually wears off as they grow older. It scarcely ever occurs after puberty. It sometimes terminates fatally within twenty-four hours, although, when death happens, it more commonly occurs on the fourth or fifth day. In many cases the fate of the patient will be determined in twelve hours, or even less.

The supervention of severe inflammation of the bronchia is the usual cause of death.

It commences usually with a slight cough, hoarseness, and sneezing, as though the patient had caught cold; to which succeeds, in a day or two, sometimes sooner, a peculiar shrillness and singing of the voice, as if the sound were sent through a brazen tube. In the progress of the disease, there is a sense of pain about the top of the windpipe, and a difficulty of breathing, with a wheezing sound in the inspiration, as if the passage of the air were straightened; the cough which attends is sometimes dry, and if any thing be spit up, it is a matter of purulent appearance, and sometimes films resembling portions of a membrane. There is a frequency of pulse, restlessness, and uneasy sense of heat; frequently a redness and swelling in the back part of the mouth, but sometimes no appearance of inflammation. The countenance exhibits great distress; the head and face are covered with perspiration from the violence of the struggles; and the lips and cheeks are alternately pale and livid. Many of the symptoms enumerated above, may exist without much present danger, this being usually to be measured chiefly by the difficulty of breathing, and the state of the pulse. Hoarseness, a hard ringing cough, and a crowing inspiration, may exist without danger; but when the breathing

is audible and difficult, and the pulse hard and frequent, accompanied with much fever, the case calls for the most vigilant attention, and most active treatment.

The preceding is *the first stage* of the malady; the second is denoted by a husky and suffocative cough, rather than one loud and sonorous; the voice is whispering; the respiration wheezing; the countenance pale; the eye languid; the pupils dilated; the tongue loaded and with purplish edges; the skin much less hot; and the stools dark and fetid. From this *second stage* of croup comparatively few patients recover. Should the disease advance to a fatal termination, the eyes become hollow; the countenance sinks; the extremities grow cold; the breathing becomes frequent, interrupted, and laborious; and great restlessness is manifested.

The power of swallowing is unimpaired.

Whatever tends to weaken the system, or produce any degree of irritation in the lungs, may be considered to predispose to this alarming complaint; and it is, therefore, not difficult to account for the greater frequency of the disease in latter than in former times, since the modern system of bringing up children is so much more sedentary and luxurious than that formerly pursued, and, therefore, more likely to weaken the organs of the chest, together with the general constitution. General weakness, no doubt, disposes to it; and it is certain, that all diseases originating directly, or more remotely, in a delicate and irritable state of body, are greatly multiplied of late years. Cold is the principal exciting cause; and it is most frequent in winter and spring, and in marshy situations, and near the sea-coast. It is probable that certain disordered states of the digestive organs materially assist in producing it. Particular families are severely affected by it, at which we cannot be surprised. It is not contagious.

There is a disease which often attacks the superior part of the wind-pipe, and especially of infants and children, which has so near a resemblance to croup, as to be very generally confounded with it; it is called *spasmodic croup* by some authors, and *the acute asthma of infants* by others; and is described at page 338; but, notwithstanding the resemblance of many of its symptoms, it is essentially different, and may generally be easily distinguished from it. The *acute asthma* comes on suddenly, and generally in the night; it is intermitting, the spasm subsiding in a short time, though it may return in an hour, or two, or less, but in the interval the patient enjoys perfect ease, although the voice is rendered hoarse from the previous straining. On the contrary, *the croup* very rarely commences abruptly, for it has usually the precursive symptoms of a slight cough and hoarse-

ness for a day or two, and it commonly begins in the day-time; it is not intermitting, but when the inflammation has once taken effect, it becomes a permanent cause of excitement, and the anxiety and struggle continue with little, if any, abatement till the inflammation is subdued, or death ensues.

Hysterics sometimes mimic croup. A young lady has been known to be attacked with a croupy cough, wheezing, uneasiness at the top of the wind-pipe, &c. which has deceived her medical attendant in the onset, but who, on finding that blood-letting, &c. was not applicable to the cure, has cured his patient with draughts of camphor and ammonia, with alteratives. The age of the patient is a material assistant here, in regard to the distinction or diagnosis, croup not occurring in adult age, and hysterics being as rare before puberty.

TREATMENT. The first step is to draw blood from the arm or jugular vein, and to apply leeches to the external surface of the throat and neck; after which, the following pill must be administered every second or third hour, according to the urgency of the symptoms.

> Take of calomel, six grains; opium, in powder, three-fourths of a grain; conserve of roses, a sufficient quantity to make the mass; which is to be divided into six pills.

It is a common practice with medical men, to give three, four, and even five grains of calomel at a dose, and to repeat it frequently even to very young children; but it seems to me unnecessary, and is certainly attended with danger; for, in several instances, the inflammation of the wind-pipe has suddenly given way under the employment of such doses of the mineral, and has been immediately followed by violent inflammation of the bowels, which has proceeded to a fatal termination, in spite of every remedy that great skill and experience could suggest. Such free doses of calomel have, however, been sometimes successful, and are recommended by high authority; but I would rather trust to smaller quantities, which I believe will be at least as efficacious, without being attended with danger. In children of eight years old, or above, the calomel in the foregoing prescription may be increased to nine, or even twelve grains, if the severity of the disease render it advisable; and sometimes an addition of six or eight grains of the true James's powder may be made to the six pills with great advantage. This plan must be persevered in till relief is obtained, when the pills should be given at longer intervals of three, four, or six hours, till the patient is evidently out of danger, and even for some days after. Nothing but an active and decided treatment can avail in this disease, and there is no doubt that the

judicious and continued use of calomel, is here one of the most powerful remedies known.

Very copious general bleeding at the commencement of the attack has occasionally carried off the disease at once, but leeches will usually be found to answer best in infants.

The bowels should be opened early by the exhibition of an active purgative, such as three grains of calomel with ten grains of rhubarb.

Blistering is of doubtful advantage, and I would never torture a child by resorting to it in the active stage of this complaint. After the violence of the symptoms has been subdued by the foregoing means, blisters are likely to be serviceable as assistants in perfecting the cure, and making it permanent.

I have already remarked, that the disease sometimes proceeds so rapidly, as in the course of ten, fifteen, or twenty hours to have passed into the *second* stage, when there is little hope of recovery; consequently, it will not unfrequently be a subject of enquiry, within the first twelve hours, should the blood-letting and calomel have failed to arrest its progress, whether we ought not to try some other means, and what means? Indeed, one other remedy *of great power* still remains, and only one—it is the tartar emetic. Should the symptoms be urgent, and the preceding remedies not have effected satisfactory amendment, I would advise an *immediate* recourse to the tartar emetic, which should be given to children as young as two or three years, in half-grain doses, (in water,) every half-hour, till *full vomiting* supervenes. When the vomiting has subsided two hours, the tartar emetic should be recommenced and continued as before, and thus we may continue to treat the patient till the disease is evidently arrested in its progress, when it may be continued in the smaller doses of a quarter of a grain every two, three, or four hours. Some consider the tartar emetic to be a more powerful remedy in croup than calomel.

Dr. H. Hoffman recommends the sulphate of copper as an excellent remedy in croup, especially after blood-letting. He begins with three, four, or more grains, administered in a little water, so as to excite instant vomiting, after which he continues the medicine in smaller doses, in conjunction with digitalis.

Take of sulphate of copper, half a grain; infusion of digitalis, half a drachm; distilled water, an ounce and a half; syrup of marshmallows, a drachm.—Mix for a draught, to be taken twice or thrice a day.

After the first and acute symptoms have been conquered, to relieve the febrile symptoms, the mixture, No. 81, page 115, or the draught, No. 24, page 102, may be given as there

directed. The tincture of digitalis, in the dose of five or six drops every four hours, has been recommended as being very serviceable, but it is not to be depended upon at the height of the disease; when the patient is recovering, it may sometimes be a useful assistant. The decoction of seneka will likewise be a valuable medicine, in some instances, at the same period. It has seemed powerfully to assist the separation of the membranous concretion within the windpipe. The decoction of seneka is made by boiling an ounce of seneka root in two pints of water down to a pint, and then straining: the dose is from three to five table-spoonfuls for an adult, three times a day.

Mr. Mackenzie, Andersonian professor of surgery in Glasgow, has recommended the application of a solution of nitrate of silver, (common lunar caustic,) to the back part of the throat, as a very valuable local remedy in croup. He says, that it removes the fibrinous crust covering the tonsils, and uvula, promotes the separation of that lining the wind-pipe, and rapidly alleviates the worst symptoms of the disease. The solution he employs is a scruple of nitrate of silver in an ounce of distilled water. By means of a large camel hair pencil, this solution is to be freely applied, once or twice a day, according to the severity of the symptoms, to the whole lining membrane of the *fauces*. The surface of the tonsils, or wherever else the fibrinous crust is actually in view, is to be particularly attended to; and he does not hesitate to push the pencil to the lower part of the *pharynx*. "This remedy," says Mr. Mackenzie, "so far from being productive of any irritation, beyond the mere mechanical and temporary one attending its employment, uniformly alleviates the symptoms of croup, such as the difficult respiration, the barking cough, and the peculiar anxiety of the little patient. It has evidently such an effect upon the diseased surfaces, both those which it actually touches, and those which are continuous, as to induce them to throw off the false membrane by which they are covered, and it appears also to prevent the further progress of the exudation." This remedy appears to me to be likely to prove useful, although I cannot say any thing in favor of it from my own experience.

If the pulse become fuller, more steady, and less frequent, the breathing freer, and less hurried, the peculiar sound of the voice and cough begin to wear off, and the patient appears less anxious and oppressed, the prognostic is good; but we cannot with certainty rely on the favorable change till the remission has lasted a considerable time; for, after the most favorable appearances, the disease has returned with greater violence, and proved fatal. It is, therefore, of the utmost importance that the means of cure should not be abandoned too early. The prac-

titioner should be particularly on his guard where the patient, though he may have obtained a great freedom in breathing, still remains dejected and oppressed.

When all the foregoing means prove unsuccessful, and the difficulty of breathing greatly increases, it has been recommended by some practitioners to make a small opening into the windpipe, in order to prevent suffocation. This operation, which is called *tracheotomy*, is by no means formidable in very skilful hands; it may be done in a few minutes, and in extreme cases is said to have saved the patient from impending death. I doubt, however, whether it is applicable to croup; it is certainly called for in extreme cases of inflammation of the larynx. Dr. J. Cheyne's remarks, (*Pathology of the Larynx and Bronchia, p.* 41, 1809,) which are unfavorable to the operation, are undoubtedly just.

The diet during the inflammatory stage should be very spare, and consist only of farinaceous decoctions, as thin gruel, toast-water, &c.

Croup has become a frequent complaint of late years, but is by no means so common as some people suppose, a deep croaking cough, and the infantile acute asthma, (which is a spasmodic complaint,) being often mistaken for it. The best means to prevent a recurrence of this disease in those who have been attacked with it, and to ward off its occurrence in those who appear disposed to it, from family make and constitution, or other causes, are the use of tonic medicines, as No. 106, or 115, the cold bath, a nutritious diet of easy digestion, a strict attention to the state of the bowels, active exercise, and guarding against taking cold.

Dr. Willan remarks, in his *Reports on the Diseases of London*, that the croup is an article in the Bills of Mortality, but of modern date. "No mention," says he, "of croup occurs in the Bills of Mortality before the year 1793, when twelve cases are recorded. During the period of five years, viz. from 1796 to 1800, the aggregate number of deaths from this disease stated in the bills is eighty: within the last five years, ending December 1820, it has increased to five hundred and nine."

Croup now and then assumes a chronic character, and runs on for many days, or even weeks. In such cases, the most effectual remedies are the calomel pills above recommended, (one pill being given three or four times a day,) an occasional antimonial emetic, blisters on the chest, or between the shoulders, and a spare though nutritious diet. When the croupy fits occasionally return during several weeks or months, and the foregoing means fail in preventing their recurrence, assafœtida will sometimes remove them entirely.

OF CUTS.

Generally speaking, all that is necessary to be done in case of incised wounds, or cuts, is to clear away the surrounding blood, with all extraneous substances, and then to bring the lips of the wound neatly and closely together, retaining them in that position by slips of adhesive plaster, spread on linen; and if the cut be deep and extensive, supporting it and the surrounding parts by proper bandages.

In large wounds, interstices should be carefully left between each of the slips of plaster, to facilitate the escape of secreted matter, or effused blood. The first dressings should remain on untouched for three or four days; and if much pain or inflammation follows the accident, a little of the aperient mixture, No. 73, will be advisable, with the pill No. 98, page 119, every night, and a spare diet.

The bleeding consequent upon wounds may generally be stopped by pressure, and rest, which is the best mode. The application of cobweb may, however, be resorted to, and is sometimes useful in obstinate bleeding from cuts.

Formerly, it was the common practice of surgeons to sew up long or deep wounds with the needle, but this is now rarely done, and should always be avoided if possible. The lips of the most severe cuts can generally be retained in contact much better, and with far less irritation, by means of adhesive plaster and bandages than by any ligature.

In cuts which nearly separate any particular member of the body, as a finger for example, an union by the foregoing means ought to be invariably attempted, and will usually succeed if the attempt be made without delay. It is well known that even the nose, after being nearly, or quite separated from the face, has been perfectly united to it again by means of strips of plaster.

For slight cuts with a knife, or any other sharp instrument, the Riga balsam is an excellent application. It usually stops the bleeding immediately.

In case of a cut that penetrates to, and divides an artery, the tourniquet must be immediately applied a little above the injury, until the assistance of a skilful surgeon can be obtained. If a tourniquet is not at hand, a hard conical compress should be made, and fixed over the seat of injury, the conical point being placed as near as possible over the mouth of the bleeding vessel. In defect of any thing better, a conical compress may be made with farthings, half-pence, and penny pieces, arranged and bound up in a piece of linen.

OF DEAFNESS.

By deafness is usually meant a total inability of hearing or distinguishing sounds; but in this place that term will also include hardness of hearing, in which this faculty is so diminished, that articulated sounds can be heard only with considerable difficulty, or with the assistance of a particular apparatus.

Deafness most commonly originates either from some organic defect or impediment, or from local debility or relaxation.

The organic defect may exist in the outer or inner entrance, or in the cavity of the ear. The outer entrance has sometimes been closed by a preternatural membrane, which may be situated either superficially or deep in the external cavity of the ear; sometimes it has been blocked up by indurated wax, insects, or other extraneous substances. Obstruction of the Eustachian tube is often a cause of a considerable degree of deafness; or it may arise from ulceration or some other affection of the tympanum, or of the drum of the ear; or from an insensible state of the auditory nerve, or of the surfaces on which its filaments are spread. If the defect exist in the internal cavity of the ear, its precise nature can seldom be known during life, and if known, would rarely admit of a remedy.

Deafness dependent on local debility or relaxation, may be induced by a cold, a long exposure to loud and deafening noises, various fevers, and inflammations, rheumatism, head-ache, and repelled cutaneous eruptions.

Treatment. The particular plan of treatment to be pursued will depend on the nature of the cause giving rise to the deafness, and must, therefore, vary considerably in different cases; and the exercise of great attention will frequently be necessary in order to ascertain the real nature of the case. Children are sometimes born with a preternatural membrane, which closes the external opening of the ear, and then this membrane must be carefully divided with a small knife, the flaps be cut away, a tent of a suitable size introduced into the opening, and the wound be thus kept constantly dilated, until it is completely healed.

If the hardness of hearing be owing to the lodgment of indurated wax, the patient, besides his inability to hear, complains of noises, particularly a clash or confused sound in mastication, and of heavy sounds, like the ponderous strokes of a hammer. The most speedy and effectual way of removing the hardened wax, is by syringing the ear with warm water, three or four times a day, until it is brought away. A large syringe, capable of holding six or eight ounces of water, should be employed for

this purpose; and the evening before the syringe is used, a little sweet oil may be dropped into the ear.

Insects, and foreign bodies, lodged in the ear, frequently occasion deafness, and sometimes give rise to extraordinary symptoms. Cherry-stones, peas, or other small bodies, may generally be extracted by a pair of forceps, a little oil of almonds being first injected; and worms, or other insects, are most certainly dislodged by introducing into the ear some bitter oil, which is fatal to these animals. One of the best oils for this purpose is an infusion of tobacco in oil of almonds.

The external passage of the ear is occasionally too narrow for the admission of a due quantity of the sonorous undulations, and the sense of hearing is of course impaired. If this depends upon malformation of the bone, it is manifestly incurable; but if it is owing to a thickening of the soft parts within the passage, great good may in general be gained by gradually dilating the passage with tents, which should be increased in size from time to time; and lastly, making the patient wear, for a considerable period, a tube, adapted to the part in shape. Sometimes it may be advisable to inject into the passage a strong solution of lunar caustic, in order to produce a detachment of the thickened portions of the skin. Mr. Earle, of London, cured a patient of hardness of hearing depending on a narrowness of the external passage, by the solution of lunar caustic.

Deafness, depending on an eruption of small ulcers affecting the external passages of the ear, is, for the most part, curable. In such cases, the ichor, which exudes from the pores of the ulcerated surface, thickens in the passage, and not only obstructs the entrance of sound, but is accompanied with a great degree of fetor. Here the alterative pill, No. 98, or 99, page 120, should be given every night, and the ear be injected once or twice a day, with the lotion, No. 70, page 113, or with a lotion made by dissolving six grains of oxymuriate of mercury in a pint of lime-water. The ointment, No. 89, page 117, is also a useful application.

When deafness originates from disease of the tympanum, or cavity directly under the drum of the ear, there is usually a discharge of pus, and the treatment is the same as advised in the last paragraph. In this state, blisters or setons behind the ears, or between the shoulders, may also be advantageously employed.

Obstruction of the Eustachian tube, which runs from the back part of the mouth into the internal cavity of the ear, is often a cause of a considerable degree of deafness, because it is necessary for perfect hearing, that air should be conveyed from the mouth through this passage into the cavity of the

tympanum, which now can no longer happen. When this tube is obstructed, the patient cannot feel the drum of the ear crackle, as it were, in his ear, on blowing forcibly with his nose and mouth stopped. Previous ulceration, or disease of the throat, will assist us in ascertaining the nature of the case, since it generally arises from ulceration in the superior part of the throat, or from a very severe cold. The most effectual remedy for this kind of deafness, consists in making a small puncture in the membrane of the tympanum. Sir Astley Cooper first recommended this operation, and he has resorted to it successfully in several instances.

Nervous deafness is attended with various complaints in different cases;—noises in the head of sundry kinds, the murmuring of waters, the hissing of a boiling kettle, rustling of leaves, blowing of wind, &c. Other patients speak of a beating noise, corresponding with the pulse, and increased by bodily exertion, in the same degree as the action of the heart. The treatment proper in nervous deafness, consists in administering tonic medicines during the day, as No. 102, 103, or 115, page 121, together with a mercurial alterative at night, as No. 99, page 120, and occasional aperients. If the patient be of a spare habit, the aperient pill, No. 100, or 101, will be most proper; if of a full habit, the draught No. 27, or 28, page 103, should be preferred. A blister should likewise be applied behind the ears, once in eight or ten days, and electricity is in some cases very useful. Electricity is considered hurtful by most writers, when the patient is very irritable, and subject to vertigo, bleeding from the nose, and great determination of blood to the head. The fumes of tobacco have sometimes been perfectly successful in this and other kinds of deafness. They are to be drawn into the mouth, and forcibly pressed against the Eustachian tubes by closing the lips and nostrils, and then urgently sniffing the vapour upwards to the palate. The late Mr. Grosvenor, an eminent surgeon at Oxford, is said to have been cured of severe deafness by the use of tobacco smoke.

Polypus, or fungous excrescences in the ears, will sometimes bear to be removed by ligature or the knife, but great caution is necessary in resorting to these measures.

Mr. Abernethy thought diseases of the ears require a soothing plan of treatment, and he was, therefore, averse to any experimental or irritating measures. He believed deafness might often be relieved by improving the condition of the digestive organs, and relates, that a gentleman applied to him for what he thought a syphilitic affection; Mr. Abernethy assured him it was no such thing, and recommended attention to diet and regimen, with five grains of blue pill, to be taken every other

night, and a pint of compound decoction of sarsaparilla, in divided portions, in the course of the day: by these means, besides being freed from his disorder, he was cured of a great portion of habitual deafness. Undoubtedly deafness is often dependent on deranged health, and the remarks made under *Chronic Disease in General*, page 304, et seq. are strictly applicable to it in, I believe, the majority of cases.

OF DIABETES.

Diabetes is a considerable discharge of urine, for the most part excessive, of a violet smell and sweet taste, and attended with great thirst and general debility.

It often makes its approach insidiously, and may arise to a considerable degree, and exist for some weeks without being particularly attended to. It is attended mostly with a most voracious appetite; an insatiable thirst; a dry harsh skin; a white and foul tongue, sometimes unnaturally clean and red; depraved taste; a sense of weight, or even acute pain in the loins; and frequently with a hay-like scent or odour in the breath, and issuing from the body. The kidneys discharge a fluid usually very limpid and large in quantity, though sometimes tinged with green, like a diluted mixture of honey and water, and possessing a sweet taste more or less powerful; the pulse is quicker than in health; the flesh wastes rapidly; and in a very advanced stage of the disease, the feet and legs swell, and the skin becomes cold and damp. A troublesome costiveness frequently attends, and sometimes an affection of the lungs.

The quantity of urine evacuated by diabetic patients is generally profuse, and, in some instances, has amounted to the astonishing increase of sixteen or twenty quarts in twenty-four hours.

This disease is occasionally to be met with in early life, but generally occurs at a more advanced period, especially in constitutions broken down by intemperance. The *predisposing* and *exciting causes* are chiefly such as debilitate the general system, as the abuse of spirituous liquors, cold applied to the body, immoderate evacuations, crude unwholesome diet, and the excessive use of mercury. It is most frequently met with in men, and it seems to prevail in particular families.

Medical men differ respecting the *immediate cause* of diabetes, but the most general opinion is, that it is dependent upon a morbid action of the stomach and other digestive organs, which necessarily, therefore, constitute its real seat. This is the opinion of the present author, who, however, conceives the explanation to be incomplete, without admitting the existence of

a peculiar condition of the kidneys, either arising secondarily, or being constitutional, and therefore original, but which alone would not be sufficient to produce the complaint.

The *distinguishing sign* of diabetes is the presence of sugar in the urine. Every excessive urinal flow unaccompanied by this symptom, belongs to, or forms, a different complaint, and is very generally the consequence of some nervous disorder, or of a simple relaxation of the uriniferous tubes.

TREATMENT. The objects are *to restore the general health and digestive energies of the frame; and to diminish the quantity and improve the quality of the secretion from the kidneys.*

The most successful plan of treatment hitherto discovered, consists in a strict adherence, both in regard to quantity and quality, to the most wholesome diet, chiefly of animal food, together with regular exercise in the country, and the use of tonic, astringent, and narcotic medicines, the most efficacious of which are, the mineral acids, particularly the nitric,—lime water,—bark,—whortle-berry powder,—preparations of steel, and opium.—Blood-letting also is sometimes advisable, but requires the exercise of a nice discrimination. In this disease, the animal salts are deficient in the urine, while sugar is secreted in considerable quantity, and these means are calculated to yield the former, and to counteract the latter, at the same time that they are capable of correcting the morbid action of the digestive organs.

The nitric acid is a medicine of great importance, as it is both tonic and astringent, and it has, in several cases of diabetes, been found to succeed alone. Dr. Gilby, of Birmingham, relates instances of its success, and Mr. Earnest has given a striking proof of its value in the thirteenth volume of the London Medical Journal. It may be taken in the following way:

> Take of nitric acid, one drachm and a half; barley-water, nine ounces; simple syrup, one ounce.—Mix, and take two table-spoonfuls, in the like quantity of water, three times a day, gradually increasing the dose to four table-spoonfuls.

The late Dr. Ferriar, of Manchester, recommends a combination of bark, whortle-berry, and opium, after having used it with success, and it is no doubt a useful formula.

> Take of yellow bark, in powder, whortleberry, in powder, of each, one scruple; opium, in powder, half a grain.—Mix. To be taken four times a day, in a glass of lime-water.

He recommends lime-water for the common beverage, or distilled water may be used.

Opium is, in many instances, eminently serviceable, and has been most advantageously employed in large doses. It has the

recommendation of many eminent physicians; and where it cannot be trusted to solely for effecting a cure, will often prove a valuable auxiliary to the other means employed to overcome the existing irritation. The purified opium may be administered in doses of from one to three, four, or five grains, three times a day, either alone, or in conjunction with the nitric acid, lime-water, bark, or any other tonic. The opium in the foregoing prescription of Dr. Ferriar, may frequently be increased, with advantage, from half a grain, to one, two, or three grains.

For allaying the nervous irritability in this disease, Dover's powder is very appropriate. It may often be advantageously combined with a tonic, as a grain of quinine with four or five grains of Dover's powder, made into a pill, and taken thrice daily. Or six grains of the carbonate of iron, may be combined with the same quantity of Dover's powder, and given in the same way.

I think sarsaparilla and pareira brava to be medicines likely to be of eminent service in some cases of this disease.

Whatever medicine is resorted to, daily friction over the region of the kidneys, with either of the liniments at page 106, should be persevered in at the same time; and in obstinate cases it will be advisable to try the effect of an issue made in that part.

Blood-letting has been strongly recommended in this disease by Dr. Watt, of Glasgow, and is countenanced by many able professional men. But it is not applicable to those cases which are the result of advanced years, and of a debilitated constitution. On the contrary, where the constitution does not seem seriously affected, and the soundness of the stomach and other assimilating viscera are sufficiently proved, by the perpetual desire for food to supply the waste that is taking place, a cautious use of the lancet may frequently be useful. It is the opinion of Dr. Good, that the practice should be limited to this state of the animal frame; and I believe this to be the sentiment of the majority of the profession. It was Dr. Watt's plan to bleed to the extent of fourteen or sixteen ounces, two or three times a week, till he had made an evident impression on the complaint.

Dr. Baillie's sentiments on this disease merit attention.

"I have in the course of my medical life," says he, "seen a good many instances of this formidable disease. Of late years, a considerable proportion of such cases have got well under my care, or have had the symptoms very much mitigated. The most successful plan of treatment has been to give considerable doses of opium combined with rhubarb, or some other bitter: fifty drops of laudanum, for instance, may be given three or four times a day, mixed with some infusion of rhubarb, or infusion of columba. The rhubarb may also be given separately, in the form of pills. Under this treatment, the disease will often gradually

subside, and at length cease altogether. It is, however, very apt to recur, and therefore this plan of treatment, in more moderate doses, should be continued for some months after the patient is apparently well. Bleeding from the system generally, and topical bleeding from the loins, are often useful; for the blood-vessels of the kidneys in this disease are generally more or less distended with blood. The diet should be temperate, and should consist chiefly of animal food; and the best kind of drink is, upon the whole, Bristol water."—*Dr. Baillie's Posthumous Writings*, p. 220.

For an account of the use of the Bristol water in diabetes, see page 152.

Under the use of either of the preceding remedies, the diet should be almost strictly and perseveringly confined to small quantities of the most digestible animal food, combined with a little farinaceous matter. Diabetes is generally an obstinate, and too often a dangerous malady; and an attention to this circumstance will be absolutely necessary, as it rarely admits of any exception. Alum-whey, or lime-water, are very useful for the common beverage; and the bowels should be kept regular by the pills No. 100, or 101, page 120.

OF DIARRHŒA, OR LOOSENESS.

Diarrhœa is well known to be a complaint in which the evacuations from the bowels are crude, loose, and too frequent, with little griping, or tenesmus.

There are several species of the complaint, the principal of which are the bilious looseness, in which the fæces are of a bright yellow; the mucous looseness, characterized by a considerable discharge of acrid mucus; the milky looseness, known by the milky appearance of the stools; the lientery, in which the food is passed rapidly, and with little change; the serous looseness, in which the motions are almost entirely liquid and limped; and the yeasty looseness, remarkable for the sour smell, and the frothy, yeasty appearance of the evacuations.

In all the forms of this disease, the chief *immediate cause* of the diarrhœa is an increase of the natural peristaltic action throughout the whole or a great part of the intestinal canal, which may be produced by irritating materials thrown into the bowels by the mouth; by a diseased change in the fluids, which are naturally secreted into them; or by an irritable state of the intestines themselves, or the membrane that lines their inner surface.

The principal *exciting causes* are, the application of cold to the surface of the body, and especially the transition from a hot climate into a colder region; the sudden change from a cold to a hot climate; suppressed perspiration; acrid indigestible

aliment; inertness or torpitude of the glands of the intestines; the abuse of active purgatives; worms; and a diseased condition of some part of the intestinal canal.

The diarrhœa produced by sudden cold is commonly of the acrid mucous character; while that caused by a transition from a cold to a hot climate is in general the bilious looseness; and that remarkable for the yeasty appearance of the motions, is almost invariably the consequence of positive disease in some part of the bowels, particularly the larger bowels.

This disease is *distinguished* from dysentery by being unattended either with inflammation or tenesmus; and by the appearance of the stools, which in diarrhœa are generally composed of some portion of the usual alimentary matter, while in dysentery they are, for the most part, wholly destitute of it, and bloody.

TREATMENT. Generally speaking, ipecacuanha, both in the form of the simple and compound powder; simarouba bark; tormentil root; and alterative doses of calomel, will be applicable, perhaps to every species of diarrhœa, and will often be eminently serviceable. The following combination of ipecacuanha and simarouba bark will be found a powerful remedy.

Take of ipecacuanha in powder, three-fourths of a grain; infusion of simarouba bark, one ounce.—Mix, for a draught, to be taken three times a day.

That very skilful physician, Dr. George Fordyce, was partial to an union of ipecacuanha and tormentil root, which is certainly of great value, and applicable to looseness, whether recent or of long standing, and whether the result of simple debility and irritation in the intestines, or of positive disease.

Take of ipecacuanha, in powder, three fourths of a grain, or a grain; tormentil root, in powder, half a drachm.—Mix. To be taken in dill or common water, three or four times a day.

Three or four grains of the compound powder of ipecacuanha is also very useful, especially if combined with two or three grains of mercury with chalk, and a warm bath at ninety-seven or ninety-eight degrees, following it with a flannel roller round the abdomen, for a few days, which should be carefully and gradually removed. These medicines may be made into a pill with a sufficient quantity of opiate confection, and repeated three or four times in twenty-four hours. All these medicines determine to the surface of the body, and thus relieve the internal parts; and the above prescriptions are likewise capable of giving tone to the intestinal canal. In obstinate cases of diarrhœa, especially if symptoms appear of any actual disorganization in the parts affected, the compound calomel pill, No.

98, or 99, page 120, every night, or every other night, will be advisable in conjunction with the above.

In the *bilious* diarrhœa, a little calomel is usually necessary and useful. Two or three grains, combined with eight grains of powdered rhubarb, will be a proper form for its exhibition; which should be followed by the administration of diluting and demulcent drinks, as infusions of linseed, or quince seed, and decoctions of sago, Embden grits, or isinglass. The calomel and rhubarb may here be repeated for two or three days, and be succeeded by the compound powder of ipecacuanha if the looseness continue; or the patient may at once take two grains of mercury with chalk, *(hydrargyrus cum cretâ,)* and two grains of compound powder of ipecacuanha, twice or thrice a day, following it on the second day with a little castor oil. This plan will likewise be frequently of great service in the milky diarrhœa.

In the *lientery*, or that species of diarrhœa in which the food is passed rapidly, and with little change, the most efficacious medicines are those which are capable of giving energy to the digestive organs, such as the tonics recommended under *Indigestion*, particularly infusion of columba, with nitric acid, and opium; and rhubarb with ipecacuanha and ginger. The *alkaline tincture of rhubarb* (page 2,) is a very useful medicine.

The first prescriptions above are among the most valuable in the *acrid mucous* diarrhœa, and in that of the *serous* description. And in that kind remarkable for the yeasty appearance of the stools, alterative doses of mercury at night, as No. 98, 99, or 112, page 120, with the ipecacuanha and tormentil powder in the day, and an occasional tepid bath at ninety-seven or ninety-eight degrees, are certainly some of the means which have been found most beneficial. This last species is of a very unfavorable description; but I am much inclined to think that the nitro-muriatic acid bath (see page 61,) would sometimes be very useful.

A very peculiar kind of diarrhœa is occasionally met with, in which the patient voids, along with the excrement, whitish, membrane-like tubes, which give to the unprofessional inspectors the idea of the internal mucous membrane of the bowels coming away. These tubes are a diseased secretion, and show a great degree of irritability in the bowels, and, probably, of slow inflammation. The fæces are mostly discharged with great pain, and of a small calibre. The balsam of capivi will be found eminently serviceable in this species, with which may be advantageously joined the pill, No. 99, page 120, every or every other night. The balsam may be taken in doses of thirty, forty, or fifty drops, three times a day, mixed with mucilage of gum

arabic; and an injection of a pint of warm water, with a teaspoonful of laudanum, should be thrown up once or twice a day. Emollient injections, as No. 9, page 97, are also useful.

Beside the medicines already noticed as beneficial in looseness, the decoction of oak-bark, infusion of quassia, decoction of Iceland moss, alum, and lime-water, have all been occasionally found very useful. They have been more especially serviceable in chronic, or long standing diarrhœa, which ought to be removed by degrees, and requires a strengthening medicine, which is, at the same time, astringent and tonic. In this protracted species, some persons have obtained much benefit from drinking about a pint of lime-water during the day, mixed with an equal quantity of milk, in which an ounce of gum arabic has been dissolved. It is likely to be generally useful in the diarrhœa of old people, and where there is positive disease in the bowels.

For an excellent remedy in the diarrhœa of the consumptive see page 329.

When this complaint makes its attack with great foulness of the stomach, or follows excess in diet, it is frequently advisable to commence the treatment by administering an emetic of twenty grains of ipecacuanha powder.

Diarrhœa is extremely common in infants and children, especially from the commencement of teething, or the time of weaning, to the third year. If it occurs at the period of weaning, the stools are usually greenish, watery, or slimy; sometimes ash-coloured, and attended by griping pains, often by retchings and vomiting, with symptomatic fever. Sometimes they are pulpy, of a clayey colour, and very offensive. Here, in general, the best treatment consists in giving a grain or two of calomel, following it directly with a dose of castor oil, if matters appear accumulated in the bowels; if not, give three grains of mercury with chalk, three grains of calcined magnesia, and one grain and a half of Dover's powder, in jelly. Do not attempt forcibly to check the looseness, but rather to moderate it, and to improve the stools. If the motions are very slimy or bloody, or squirted out forcibly, three or four leeches should be applied to the belly, and followed by fomentations, and a clyster of thin warm starch and olive oil; the medicines just named, must likewise be continued in smaller doses, and a flannel bandage applied round the belly.

From whatever cause a diarrhœa proceeds, whenever it is found necessary to check it, the diet ought to consist of rice, boiled with milk, or beef-tea with baked flour, together with preparations of sago, pearl-barley, arrow-root, and Embden grits, and the lighter sorts of roast meat, as mutton, and lamb.

Vegetables should be altogether avoided, and a little weak brandy and water be taken now and then instead of malt liquor.

Those who are liable to frequent returns of this disease, either from peculiar weakness, or too great an irritability of the bowels, should live temperately, avoiding crude fruits, unwholesome vegetables, and all food of difficult digestion.* They ought likewise to beware of cold, damp, and all sudden changes; and they should wear flannel next the skin.

In most cases of this complaint, purgatives are found to be injurious, although mild aperients are sometimes very useful, especially if the patient has taken indigestible food, or eaten to excess; which forms a grand mark of distinction between the treatment of dysentery and diarrhœa, as in the former, purgatives are almost always more or less necessary, and frequently of eminent utility.

It is a common domestic practice to give mulled port wine and spices for the cure of looseness, but it is seldom advisable, and very often injurious. A little brandy and water is a better remedy, especially if it be followed by four or five grains of the compound powder of ipecacuanha. The powder, No. 127, page 126, is a valuable remedy in the looseness and disorder of the bowels so frequent in the autumn. For the simple ordinary purging of children, give three grains of rhubarb with the same quantity of magnesia, in cinnamon or spearmint water, and repeat it, if necessary, once in two days. The diarrhœa that occurs during teething, should never be hastily checked. It ordinarily keeps off feverish irritation; and, when violent, should be moderated, but not subdued. It may be lessened by giving the infant a little rice-milk, or milk and baked flour boiled together. The gums should be lanced.

OF DROPSY.

Dropsy is a preternatural collection of serous or watery fluid in the cellular membrane, beneath the skin, or in different cavities of the body, and receives different technical appellations, according to the particular situation in which it is lodged. The chief varieties, each of which we shall distinctly notice, are,

1. Dropsy of the cellular membrane, appearing on the surface of the body, under the skin, either generally or partially. Called *Anasarca.*

2. Dropsy of the belly, that is, in the cavity of the abdomen. Called *Ascites.*

* See the information given respecting diet under *Indigestion*, which is applicable here.

3. Dropsy or water in the chest. Called *Hydro-thorax.*
4. Dropsy of the head.
5. Dropsy of the scrotal bag. Called *Hydrocele.*

Dropsy under whatever form it takes place, is, in most instances, a disease of debility. Its general *causes* are those which induce debility, either general or local, such are protracted fevers; long exposure to a cold and moist atmosphere; excessive labour; unkindly child-bearing; excessive use of ardent spirits; habitual indigestion; great loss of blood; drinking cold water when heated; and insufficient or innutritious and indigestible food. Positive disease in some important organ is a frequent cause, particularly disease in the heart, digestive tube and liver

The *immediate cause* of all kinds of dropsy is, either a profuse exhalation on the part of the small excernent arteries of the dropsical part, or a want of action in the absorbing vessels; or both may be united.

OF DROPSY OF THE CELLULAR MEMBRANE.

This form generally commences in the lower extremities, and first shows itself towards evening with a swelling of the feet and ankles, which by degrees ascends, and successively occupies the thighs, and trunk of the body. When it has become very general, the internal organs are affected in a similar way; the lungs partake of the affection; the breathing becomes difficult; and is accompanied by cough, and the expectoration of a watery fluid; the urine is small in quantity, high coloured, and deposits a reddish sediment; sometimes, however, it is of a pale whey colour, and more copious. There is costiveness; insatiable thirst; a pale dry skin; sallow complexion; torpor; heaviness; troublesome cough; and slow fever. The water often oozes through the pores of the skin, or raises it in the form of small blisters.

Its *causes* have been stated in the preceding page.

Treatment. The indications of treatment are to palliate or remove the exciting cause of the complaint; then to unload the system of the weight that oppresses it; and, lastly, to re-establish the frame in health and vigour.

If a habit of intemperance, a sedentary life, innutritious food, exposure to a cold and moist atmosphere, or similar causes, have originated the dropsy, these must, of course, be corrected, before any medical plan for evacuating the water can be of permanent benefit. And where the cause lies in some internal mischief, alterative doses of mercury offer the greatest proba-

bility of removing it, particularly the pill, No. 98, 99, or 107, page 120, which may be administered in conjunction with any of the medicines next to be spoken of.

The principal means of evacuating the accumulated fluid in all dropsies, are by the employment of certain purgative and diuretic medicines, and by scarification, or other cutaneous drains. Elaterium; cream of tartar; black hellebore; the inner bark of the elder tree; gamboge; and seneka root, are generally considered to be the most efficacious purgatives in this disease: and foxglove; squill; meadow saffron; nitrate of potash; subcarbonate of potash; and hedge-hyssop, to be the most valuable diuretics.

The elaterium is a powerful purgative, and will sometimes prove of great service in expelling the water. It seems best adapted to those cases in which the strength is not greatly reduced.

Take of elaterium, six grains; calomel, six grains.—Rub them carefully together, and with a sufficient quantity of extract of gentian, form into twelve pills. Of these, one should be taken every hour, commencing early in the morning, till they *begin* to operate, when they must be discontinued. During their operation, the patient's strength ought to be supported by strong beef tea and bread, with a little wine.

Cream of tartar has been a favorite medicine in dropsy with many celebrated physicians. An ounce of it, mixed with ten grains of powdered ginger, may be given every three hours till it operates copiously; or half an ounce of it may be combined with two grains of gamboge, and repeated in the same way. Dr. Home, of Edinburgh, has observed, that it radically cured fourteen patients out of twenty in whom he tried it. Mixed with a large quantity of water, it quenches the thirst very pleasantly, and the patient should, therefore, take this drink as a common beverage. Black hellebore has also been highly praised. The following pill, called Bacher's pill, was once in high reputation, and sold all over Europe, for the cure of dropsy.

Take of extract of black hellebore, half a drachm; myrrh, in powder, carduus benedictus, in powder, of each, eleven grains.—Mix, and divide the mass into seventy pills, five of which are to be taken every six hours, till they operate well on the bowels.

The expressed juice of the inner bark of the common elder tree may be given in the dose of from a drachm to half an ounce, and repeated every three or four hours, till it has the desired effect of producing copious evacuations by stool and urine, which it is capable of doing, and by which means the illustrious Sydenham observes, that he had cured a vast number of cases. The decoction of seneka, may be taken in the doses mentioned

at page 251; but it is certainly inferior to the foregoing remedies, which may be likewise asserted of gamboge.

Sydenham has some excellent observations on the use of purgatives for the cure of dropsy. He very wisely remarks, that before administering such medicines, we should ascertain whether the patient be easy or hard to purge, because, in the former case, the milder purgatives will generally answer best; while in the latter, the strong drastic cathartics, as elaterium, black hellebore, &c. will be absolutely necessary to produce any good effect. He speaks favorably of the syrup of buckthorn, as an effectual purge to those dropsical patients who are easily moved, and relates the case of a woman who had this complaint to a great degree, her belly being swelled to an incredible size. He gave her an ounce of the syrup of buckthorn before dinner, and it brought away an almost inconceivable quantity of water. "Encouraged by this success," says he, "I gave it every day, only interposing a day or two occasionally, when she seemed weaker than ordinary. And the water being by these means carried off by degrees, the swelling of the belly diminished daily, and she recovered."

As diuretic remedies, *squill*, *foxglove*, and *meadow-saffron*, are undoubtedly very valuable. The following combinations are esteemed forms for exhibiting squill.

Take of dried squill, in powder, three grains; opium, in powder, half a grain; cinnamon bark, in powder, ten grains.—Mix for a powder, to be taken in any agreeable vehicle, three or four times in twenty-four hours.

If there appears to be a diseased enlargement of some internal organ, or, indeed, any internal obstruction, the following formula will be found highly serviceable,* or that marked No. 116, page 124.

* I have very lately seen this medicine of striking utility in the case of an elderly lady who became a patient of mine a short time since, (1828,) and whose bodily circumstances were thought desperate. She is above seventy years of age, and had been for some weeks complaining of considerable indisposition, when she began to be affected with constant drowsiness and lethargy during the day, although her nights were often restless and unrefreshing; her breathing was also difficult and hurried, more especially on motion; her feet and legs were much enlarged with a dropsical swelling, which was gradually increasing and extending; the speech was altered and laborious; the tongue furred; the strength and appetite greatly impaired, and her whole appearance and manner that of a person in whom there was taking place a general decay, or breaking up of the constitution, which seemed disposed very soon to terminate in incurable dropsy. Five grains of compound squill pill and one grain of calomel were made into a pill, and given her every night, with one of the following pills thrice a day; the diet ordered being nutritious but mild, with friction over the feet and legs, twice daily. Take of tartarized iron, two scruples; ipecacuanha, in powder, ten grains; squill, in powder, eight grains; extract of gentian, a sufficient quantity to make the whole into ten pills. This plan restored her in about a month, and, in my opinion, her recovery ought to be mainly attributed to the use of the squill pill and calomel.

Take of compound squill pill, one drachm; calomel, six grains.—Mix them well together, and divide into twelve pills. Two to be taken every night, or twice a day.

Foxglove is rarely applicable to dropsical persons of tense fibres and great natural strength; but in those with a feeble or intermitting pulse, whose dropsical limbs and body are soft and yielding, the complexion pale, and the skin cold, it is sometimes a valuable diuretic.

Take of infusion of foxglove, four ounces; tincture of foxglove, half a drachm; acetate of potash, one drachm; liquid laudanum, ten drops.—Mix, and let one table-spoonful be taken three times a day.

The wine of *meadow-saffron* should be given in doses of a tea-spoonful twice a day in the beginning, which may be gradually increased to two, three, or four tea-spoonfuls. It is very useful in case of great pain, as it is an effectual anodyne. From a scruple to half a drachm of the powder of hedge-hyssop may be administered twice a day, and is said to be particularly efficacious in those dropsies which are the consequence of obstruction in some of the abdominal organs. *Broom ashes*, or the *Broom seed*, were formerly a famous remedy; but it being supposed that they owe their virtues to the fixed alkali they contain, medical men usually prefer giving ten or twenty grains of the subcarbonate of potash twice a day, to the exhibition of the ashes or seeds themselves. It has been said, that a large spoonful of unbruised mustard seed, taken every night and morning, together with the subcarbonate of potash in the middle of the day, has performed a cure in a very bad case of dropsy.

If general debility has occasioned the disease, the alkali may be advantageously united with a bitter tonic.

Take of subcarbonate of potash, ten grains; compound infusion of gentian, an ounce and a half; compound spirit of ether, half a drachm; tincture of cinnamon, half a drachm.—Mix for a draught, to be taken twice a day.

Notwithstanding what is said respecting the virtues of *broom-seed*, as contained in the fixed alkali to be found in them, I very much prefer giving this remedy as it is presented to us by nature. It is true, and we rejoice in the fact, that the art of the chemist is often turned to great advantage in extracting the essential part of plants, and presenting them to us, as remedies, in a small compass, and even in a more efficient form, of which the invaluable preparation from Peruvian bark, called *quinine*, is an example; but this cannot be done with all vegetable substances, the attempt being in some instances worse than a failure, a valuable

remedy being thereby brought into discredit. I think well of the broom-seed, and advise it to be tried in the following manner:

> Take of broom-seed, well powdered and sifted, one drachm; let it stand twelve hours in a glass and a half of good white wine, and take it in the morning fasting, having first shaken it, so that the whole may be swallowed. Walk after it if able, if not able to walk, use what exercise is possible, for an hour and a half; after which take one ounce of olive oil. Nothing must be eaten or drank for half an hour, or an hour, after taking the oil. This is to be repeated every other day, or once in three days, and not oftener, till cured.

It is considered essential that no blood should be lost during the use of this medicine. Many cases of dropsy cured by these simple means have been related on unexceptionable authority, and that recently, as well as formerly. Sydenham says, (*Works by Swan*, 1769, *p.* 529,) of a form very similar to the above, "By this remedy alone I have known this distemper cured, in persons of too weak a constitution to bear purging, when the case was judged desperate."

Dr. Buchan speaks favorably of the efficacy of a drachm of *nitrate of potash*, taken every morning in a draught of ale; and I have known it succeed in one case. It is most applicable to the dropsy of young persons, and those who have a good measure of strength remaining.

In those instances in which the dropsy appears to have originated in general weakness, where there is a feeble pulse, and a blanched complexion, without organic injury, the inhalation of *oxygen gas* has sometimes proved the most valuable tonic which experience could suggest. It has immediately invigorated the whole constitution, and thus enabled it to struggle effectually with the disease so as finally to overcome it; and in all such cases as those described, it merits a fair trial. See what is said of it under *Dropsy of the Chest.*

Under the use of either of the preceding remedies, it will frequently be highly proper to scarify the legs at the same time, which is a simple and very safe operation, if it be not left to a late period. The scarification should be made with a lancet on the outside of each knee, a little below the joint; the incision resembling in form the letter T, and just penetrating through the skin. From this cut, which will not easily close, the water will sometimes drain away in a surprising manner, and the benefit arising is often permanent.

I have said nothing respecting blood-letting in dropsy, but it is necessary to advert to it. It is a remedy which has been now and then resorted to from the earliest ages, although very cautiously; of late years several practitioners have strongly recommended it, and some of them much too strongly. In the *acute*

form of dropsy, whether general or confined to the abdomen, that is, in cases where it may have appeared suddenly or advanced rapidly, from whatever cause arising, supposing the pulse to be quick, full, and strong, and the constitutional powers of the patient unbroken, a single blood-letting from the arm to the extent of sixteen or twenty ounces, will often afford great relief, and pave the way for the more effectual operation of other remedies. This may frequently be followed, if necessary, by local blood-letting, by means of the cupping glasses, or the application of leeches; and one of the best medicines which can be prescribed to follow the abstraction of blood is the calomel and squill pill, (page 373,) twelve grains of *James's powder* being added to the twelve pills.

The diet, in all dropsical cases, ought to be nourishing, that food being selected which is easiest of digestion. The pungent aromatic vegetables are also proper, such as garlic, onions, cresses, horse-radish, &c.; and the patient's strong desire for drink may be freely gratified, for which purpose, cream of tartar dissolved in a large quantity of water, butter-milk, table-beer, weak cyder, or cyder mixed with water, will be among the most useful beverages he can resort to.

After the water has been evacuated, we must endeavour to invigorate the constitution by the use of mild, bitter and metallic tonics, with aromatics, regular exercise, change of air, and the cold bath. The tonics may be taken as recommended under the head of *Indigestion*. The daily use of a little wine will be advisable, particularly Rhenish wine.

In having recourse to active purgatives in this disease, it should never be forgotten that we are treating a disease of debility, and that every purge which does not diminish the general bulk, adds to the complaint by increasing the debility. If, therefore, upon a few trials the plan be not found to answer this salutary purpose, it cannot too soon be desisted from.

Beside the medicines above noticed, a few others have at times been praised for their virtues in dropsy, the chief of which are juniper-berries, nitrous ether, the diuretic salt, and the green lettuce; but they are certainly of very inferior value. Emetics, and certain sweating medicines, have also occasionally been employed; but they are uncertain in their operation, and are now rarely resorted to. Mr. Mudge, however, relates the case of a woman, about forty years old, who was cured of a dropsy of the belly, of long standing, by taking two scruples of compound ipecacuanha powder at bed-time, for three successive nights.

It not unfrequently happens, that water accumulates in the legs, thighs, and even in the belly, as a direct consequence of consumption of long standing; from poor weak blood; old ulcers,

accompanied with a considerable discharge; great weakness; and an immoderate evacuation of the juices and spirits by a salivation, sweating, or purging; or from too slender a diet in the cure of the venereal disease. In such instances, purging, and other violent measures, must be avoided, the cure then depending upon invigorating the general habit by the use of nourishing diet, and tonic medicines, especially steel tonics. Ten grains of tartarized iron, combined with fifteen grains of columba powder, and given three times a day, prove very serviceable here.

The following is an instructive case of dropsy from pressure on the external iliac vein, especially from the observations of Sir Astley Cooper, which it contains, and the skilfulness of the treatment, see *Lancet*, *vol.* ii. *p.* 466, 1823-24.

"W. W., aged forty, was admitted into Job's ward, June 30th, with a swelling of the right leg. He says that, about two years since, he was kicked by a horse, whilst at work in the stables at Greenwich; the blow given by one foot of the horse was received just above the crista of the ilium, and the other foot struck the upper part of the right thigh, which produced great inflammation in it; and, soon after, the glands in the groin began to swell, and remained very large and hard for a considerable time. He applied leeches and washes to the upper part of the thigh, which reduced the inflammation, but did not remove it; and, about six weeks after, an abscess formed, which burst, and discharged, according to the patient's account, a considerable quantity of matter. This kept up the irritation in the gland, and will account for its remaining a long time enlarged. The gland, however, did not suppurate. For the five months preceding his admission, he says, the limb was just as large as when he came in. It was then about twice the size of the other leg. The skin had a brawny feel and appearance. The swelling was rather tense, but yielded to pressure, and, immediately that pressure was removed, it recovered its former figure. The patient complained of its feeling very heavy, and of there being a great numbness in the foot. There was also an enlarged absorbent gland, situated just beneath Poupart's ligament, and near its insertion into the pubes; in size, as large as a pigeon's egg, and very hard. His tongue was moist, his pulse regular, his sleep good, his appetite unimpaired, looked florid, and his general health not at all disturbed.

"Mr. Morgan being unwell to-day, July 2d, Sir A. Cooper saw this patient, and at his bed-side made the following remarks: 'Dropsy, it is said, arises from an increased action of the exhalents, or from a diminished action in the absorbents, and this, in a general way, is true; but the appearances of the dropsy produced by these causes are very different. In the one, you have a tense, shining, semi-transparent skin; and, if you press your finger on it, you will find it will sink into the swelling, as if you were kneading dough, and that depression will continue some time; but, in the other, or that which arises from a mechanical impediment on the trunks of the absorbents, you cannot produce any pitting on pressure, and the skin has the appearance which you now see.' He then ordered a grain and a half of calomel twice a day, and the limb to be washed with the camphorated mercurial ointment every night. The patient was also ordered rest and the horizontal posture, with a low diet. With this treatment the swelling rapidly decreased in a week, and continued to do so, more slowly, for a fortnight. He then left off his mercury, as his mouth

had been kept some time very sore, and was ordered some brisk aperient medicine.

"July 26th.—The leg now is very little larger than the other; he can use it without any inconvenience, and the glandular enlargement has almost entirely subsided. He takes no other medicine but the house-physic every morning, which is necessary to keep his bowels regular. His health continues very good."

OF DROPSY OF THE BELLY.

This variety often comes on with loss of appetite; sluggishness; inactivity; dryness of the skin; oppression of the chest; cough; diminished urine; costiveness; and the other symptoms enumerated under the first variety. Shortly after, a protuberance is perceived in the hypogastrium, which gradually extending, at length occupies the whole abdomen, which uniformly becomes swelled and tense, in a small degree elastic, and communicates to the hand, when struck against it, the sensation of its containing an undulating fluid. The disease seldom continues long without inducing a dropsical state of the lower extremities.

In the dropsy of the belly most commonly met with, the water is contained in the general cavity of the abdomen; but there is another form sometimes occurring, in which the fluid is collected in sacs formed upon, and connected with, one of the abdominal organs: this is called the *encysted* dropsy. It is seldom accompanied, in the first instance, with any disordered state of the system; is distinctly observed to begin in a particular part of the belly, and thence gradually to diffuse itself; the strength of the patient is long unimpaired; and the appetite and respiration continue good, until the bulk and pressure of the fluid bring on those constitutional effects, which usually attend the ordinary forms of abdominal dropsy in its early stages. The *encysted dropsy of the ovaria* is not uncommon, and is treated of in my book *on the Diseases of Females.*

In addition to the general *causes* of dropsy described at page 370, we may notice disease in the bowels, liver, or pancreas; enlargement of the mesenteric glands; and local injury.

It is sometimes difficult to *distinguish* abdominal dropsy from pregnancy, where the latter is wished to be concealed; and the real nature of the case can only be known by a suitable enquiry into the state of the monthly discharge, of the breasts, and of the swelling itself.

Treatment. The indications, and general plan of treatment are precisely the same as have been detailed under the first variety; but here, instead of evacuating the water by scarification, we draw it off at once by tapping. When the fluid lies in the general cavity of the belly we can often afford very great relief by this process, and sometimes an effectual cure. If,

therefore, the foregoing remedies fail to evacuate the water, tapping should not be delayed; indeed, it is the opinion of some well-informed professional men, that, under these circumstances, the operation cannot be too soon performed after a fluctuation is distinctly felt, and the swelling from its bulk has become troublesome to the breathing, and interferes with the night's rest. In this opinion, the present author fully concurs, and believes, that though the first operation should not succeed, we shall frequently gain great advantage from a repetition of it. Instances have occurred in which a cure has been effected after twelve, sixteen, or more tappings; and a foreign author relates a cure after sixty tappings within two years and a half, in conjunction with a steady use of aperients and tonics.

One of the most efficacious remedies in this form of dropsy, is the pill of calomel and squill, prescribed at page 373. Sir Astley Cooper seems to have known this medicine very valuable in dropsy of the belly, and I have repeatedly found it far superior to any other medicine I have employed. He says,

"The medicines which experience has proved to be the most beneficial here, are calomel and squill; one grain of calomel and three of squill in powder, may be formed into a pill, or two grains of blue pill with three of squill; one of these should be administered every night, or every other night, and in the day you should give a mixture, composed of from seven to ten grains of carbonate of ammonia, one drachm of sweet spirit of nitre, twenty drops of tincture of digitalis, and an ounce and a half of camphor mixture. This draught, given once or twice a day, with one of the above pills at night, will often succeed in restoring a person to health whose constitution may be considered so broken and faulty, that it may be deemed impossible for him ever to regain a sound state of body. Should the dropsy have arisen from the irritation caused by hard drinking, this practice must be relinquished, or the complaint will not disappear."—*Surgical Lectures, No.* 46.

This eminent practitioner correctly remarks in another part,

"Medical treatment, when judiciously pursued, is very often successful in the cure of ascites; in the use of medicines, however, you must take care to direct their influence against the *cause* of the dropsy. Therefore, if the liver is the defective organ, you should endeavour to restore its healthy functions, and in this attempt your efforts will frequently be crowned with success, unless the disease has existed so long a time as completely to have broken up the constitution."

OF DROPSY OF THE CHEST.

This complaint commences with difficulty of breathing, particularly on exertion, or lying down, which is usually accompanied with a dry and troublesome cough, and a swelling of the ankles towards the evening. There is a sense of oppression at the chest; increasing difficulty of breathing; pale countenance, sometimes, however, it has a livid tinge, and conveys a peculiar

and striking expression of anxiety; urine high coloured and spare; pulse irregular, and often intermitting; palpitation of the heart; and dropsical swelling of the arms and legs. The sleep is disturbed by frightful dreams; the patient suddenly starts from his bed with a dreadful sense of suffocation; and through the whole course of the complaint, there is, for the most part, a peculiar posture, in which the patient sits constantly upright, with his shoulders raised and fixed, which he often contrives to effect by fixing his forehead on the back part of a chair, and thus pressing forcibly upon it.

The *causes* are those already noticed at page 370, acting more immediately on the organs of the chest.

TREATMENT. The general plan of treatment is the same as that already laid down at the 370th, and following pages: but squill is here sometimes particularly valuable, as it affords great relief to the teasing cough, besides being a useful diuretic. Either of the prescriptions for the exhibition of squill, given at page 372, may be employed, adding two grains of James's powder to each dose; with which frequent blisters to the chest should be combined. Indeed, whatever medicine is resorted to, blisters ought not to be omitted, as they appear to be very serviceable in this variety of dropsy. Five or six grains of the compound powder of ipecacuanha, combined with a grain of calomel, is an eligible night pill to procure rest.

Many physicians have been much disposed to extol the foxglove in this disease; but it is a doubtful remedy, and in its administration requires the attention of a professional man.

If there be much debility, myrrh and sweet spirit of nitre have been recommended.

> Take of myrrh, in powder, ten grains; sweet spirit of nitre, one drachm; infusion of roses, fourteen drachms; syrup of roses, one drachm.—Mix for a draught, to be taken three times a day.

If other remedies fail, the inhalation of oxygen gas merits a trial. It has certainly been used with complete success in bad cases, and I would never leave a patient afflicted with dropsy of the chest without resorting to it. Mr. Barr, of Birmingham, has related a case cured by it, in which "the patient's face was become pale and emaciated; his eyes stared as if taking a last conscious view of their objects; his legs were swelled to such a degree that the skin was become much inflamed; he had a continued tenesmus, and made very little urine; he could not endure a horizontal posture for a moment; he slept little, and frequently started from his sleep, under an impression of immediate suffocation." In four weeks from the patient's beginning to inspire the vital air, not a vestige of the disorder re-

mained except weakness; and at the age of sixty, he seemed to possess uncommon strength, agility, and vivacity.

If there be a palpable fluctuation in the chest, and all other means have been tried without avail, it is usual to evacuate the water by passing a trocar between the fourth and fifth false ribs.

OF DROPSY OF THE HEAD.

Dropsy of the head consists in an enlargement of that organ from watery accumulation, the sutures or natural articulations of the skull generally gaping. It is a chronic disease, and not uncommon in children, yet it ought to be carefully distinguished from the acute complaint called water in the head, of which we now hear so much, as this latter is in reality an active inflammation of the brain, and is fully described elsewhere.

It usually commences with a gradual enlargement of the head from a separation of the natural divisions of the skull, attended with slight fever, heavy pain in the head, and sometimes stupor and disorder in the bowels. But the last symptoms are occasionally very slight.

Its common *cause* is debility, either general or local.

The *marks of distinction* between this complaint and the acute inflammation of the brain, now so generally called "*water in the head*," are clearly pointed out under that article.

TREATMENT. As the present is a chronic disease of debility, no very active medicines are proper. Alterative doses of calomel, as in the pill No. 98, or 99, page 120, given twice a day, with cold lotions to the head, and an occasional aperient, form the most valuable plan of proceeding hitherto suggested. Blistering the head and neck is also sometimes useful.

When the integuments of the head are much distended, and the articulations gape wide, the skin has been punctured with a lancet, and the water drawn off by degrees. This has occasionally been done with success, but it must always be resorted to with caution, and the fluid discharged by separate stages; for if the whole were drawn off at once it will produce fainting, and may be followed by a dangerous exhaustion.

OF DROPSY OF THE SCROTAL BAG, OR HYDROCELE.

The hydrocele is a soft, transparent, pear-shaped, dropsical swelling of the scrotum, which progressively enlarges without pain.

The ordinary treatment consists in puncturing the scrotum, and injecting a slightly stimulating fluid, as wine and water, which excites a moderate degree of inflammation, by which means the two surfaces, between which the dropsical fluid is

contained, adhere together, and the cavity being thus destroyed, all future accumulation is prevented. This operation must, of course, be done by a surgeon.

In recent cases, however, an emetic, administered every day, or every other day, has sometimes succeeded in dispersing the swelling. Alterative doses of mercury are also occasionally useful, with which may be combined the application of a stimulating lotion, (as No. 68, page 113,) to the affected part. If there be any pain, leeches should be applied before using the lotion.

OF DYSENTERY, OR BLOODY FLUX.

Dysentery is an inflammatory affection of the larger bowels, in which the stools are frequent, and often bloody, attended with griping and tenesmus, the ordinary excrement being seldom discharged, and when it is, the quantity is small, and voided in the form of hard nodules. Fever very frequently attends the acute form of the disease.

The disease sometimes comes on with shivering, succeeded by heat and thirst, and other *symptoms* of fever; at others, the affection of the intestines is the first symptom. There exists unusual flatulence in the bowels; severe griping; frequent inclination to go to stool; tenesmus; loss of appetite; nausea; vomiting; frequency of pulse; and a frequent discharge of a peculiarly fetid matter by stool. This matter varies in appearance, being sometimes pure mucus, or mucus mixed with blood; pure unmixed blood; matter, (pus) or a putrid sanies; and often films of a membranous appearance, or small fatty masses, floating in a large quantity of liquid matter. Hardened excrement is likewise sometimes passed. There follows great emaciation and debility, a quick and weak pulse, sense of burning heat, and intolerable bearing down of the parts.

The fever accompanying dysentery may be either the simple inflammatory or the typhous fever. In the latter case, the disease is powerfully contagious, and of a dangerous nature.

This complaint appears under an *acute* and a chronic form. In the *acute* form, the symptoms are urgent and clearly inflammatory, the natural fæces very rarely appearing, the pain and tormina great, and blood often passing in large quantities. It terminates, for the most part, within a month.

The *chronic* species is generally a sequela or consequence of the acute, and is, as its name imports, of a less inflammatory and more protracted character than the latter: here the stools are often frequent, loose, and have much of the appearance of the natural excrement, but mixed with blood, and passed with severe tenesmus or bearing down at the anus.

It will be seen from these observations, that those who have never before been attacked with dysentery, or after a long interval of health, more especially if of a strong, or intemperate habit, are most likely to have it in the acute form, at the commencement at least; while those who have repeatedly suffered from it, or whose constitutions have been broken down by excessive fatigue, intemperance, or other causes, will often be invaded by the chronic species, even from the beginning.

The dissection of those who die of dysentery, invariably discloses an inflamed and ulcerated state of the internal membrane of the lower intestines, and especially of the colon, thus proving that the essence of the disease consists in an inflammation of those parts. The liver is sometimes found diseased, but this is probably only a secondary affection, found chiefly, or exclusively, in those who had a previous disposition to liver complaint.

The *principal causes* are, suppressed perspiration; a damp atmosphere succeeding to a high temperature; exposure to noxious exhalations and vapours; and especially a specific contagion.

It is most common in summer and autumn, and in weak, ill-fed, and intemperate habits.

It is chiefly *distinguished* by the presence of gripings, tenesmus, fever, and more especially by evacuations of blood.—See *Diarrhœa*.

Treatment. *The indications of treatment in acute dysentery are, to subdue the local inflammation, to allay irritation, and to restore a healthy secretion from the skin*; and these objects are most certainly secured by the use of purgatives, blood-letting, calomel, and anodynes, especially opium with ipecacuanha. Almost the whole of these remedies are called for, in proper succession, and according to the symptoms that present themselves, in all very severe cases, more particularly in hot climates.

In Europe, a valuable plan is, to give immediately a full dose of salts, (No. 73, page 114,) to clear the bowels, with six, eight, or ten grains of Dover's powder, made into pills, twice or thrice a day, the emollient injection, No. 9, page 97, twice daily, and the warm bath at ninety-eight degrees in the evening. These salts must be repeated every morning afterwards, at least in the beginning, and until the acute symptoms give way, when their repetition once in two days will generally be sufficient; the Dover's powder being continued as just advised, with the warm bath, fomentations, and clysters. At the same time, if the pain and tenderness of the belly are severe, and the pulse full and hard, sixteen or twenty ounces of blood should be drawn from the arm directly, and it ought to be quickly repeated, if these symptoms denoting inflammation continue but little abated by

the first bleeding. The extent to which blood-letting may be carried in this disease, must depend in a great measure on the strength and age of the patient, the intensity of the pain and hardness of the pulse, and the quantity of blood passed. Whenever these circumstances are combined, it ought to be freely employed, until the symptoms are mitigated. In the majority of severe cases the application of leeches to the lower part of the belly will be very useful, whether general blood-letting be resorted to or not. In many instances, a large blister may be laid over the abdomen with much advantage, after bleeding; and the bowels should be invariably encircled by a broad roll of warm flannel.

If severe bilious symptoms are present, a dose of calomel and rhubarb, as two grains of the former with ten of the latter, may sometimes be advantageously employed as a purgative in the morning, instead of the salts above prescribed. The calomel and rhubarb might be given twice or thrice a week, and the salts on the remaining days, when purgatives are required.

A combination of calomel and ipecacuanha will often be found of inestimable service in this complaint, and if the Dover's powder, above recommended, is not attended with so much benefit as appears desirable, it may be substituted for it. A grain of calomel, a grain and a half or two grains of ipecacuanha powder, with a third of a grain of powdered opium, may be made into a pill with aromatic confection, and given three times a day; or, a grain of calomel and four grains of Dover's powder, made into a pill in the same manner, may be administered thrice daily; the other measures above prescribed being employed at the same time. These combinations of calomel with an anodyne are sometimes of the greatest advantage.

It should be noticed here, that ipecacuanha is justly considered one of the most valuable medicines in dysentery, as it appears in Europe, being sometimes found more efficacious in procuring a discharge of the natural stools than any other remedy. This property it owes to its well known power of gently stimulating the mucous membrane of the intestinal canal, and thereby lessening irritation and preternatural contraction there, at the same time that it determines to the surface of the body. It has been regarded by some even as a specific in this complaint, and I know no respectable writer who denies its usefulness. The proper mode of exhibiting it here, is to give it in such small doses as will act moderately on the bowels, without proving emetic, for example, a grain and a half, or two grains, three or four times a day. In these doses, as I have above remarked, it may sometimes be advantageously united with calomel, and it may also be added to each aperient draught of salts.

In the *commencement* of acute attacks of dysentery, more especially if the inflammatory symptoms run very high, opium should not be given alone, either in a liquid or a solid state. In such a condition, our chief regard must be directed to lessen the existing inflammation by blood-letting, aperients, the warm bath, and emollient clysters. As an anodyne in this complaint, there appears none so suitable and efficacious for general use, as Dover's powder, that is, the compound ipecacuanha powder. If, therefore, it is not exhibited through the day, as one of the principal remedies, a dose of eight or ten grains may be given, in the form of pills, every night.

In the aggravated cases of bloody flux so often witnessed in India, and other hot climates, the following will be found a safe and efficacious mode of proceeding: Let a drachm of calomel, twenty-four grains of ipecacuanha powder, and eight grains of powdered opium, be made with aromatic confection into twenty-four pills, of which two are to be taken two, three, or four times in the twenty-four hours, according to the urgency of the symptoms; a full dose of the mixture No. 73, or an ounce of castor oil, being given every day, to clear the bowels, with the warm bath and fomentations, emollient clysters, and a flannel bandage, as already advised. At the same time, if the inflammatory symptoms are considerable, or blood appears alarmingly in the stools, bleeding must be immediately and freely resorted to, and be soon repeated, if the inflammation does not give way. Should the symptoms of local uneasiness, and tenesmus be great, a dose of Dover's powder also may be taken at night.

In cases of great urgency, occurring in India, calomel administered in the dose of a scruple, twice or thrice a day, with the use of the other means just noticed, have been often found of signal service.

In regard to diet, it should be remarked, that the object is to support the strength with as little irritation as possible. It ought, therefore, to be mucilaginous and diluting, consisting chiefly of preparations of sago, rice, arrow-root, gruel, baked flour, and such like. At the commencement of the disease, it will generally be best to confine the patient to these; but in a more advanced stage, and when the weakness is considerable, jellies and broths, taken with bread, may be allowed. Should the debility be extreme, without any tendency to acute inflammation, the complaint having lasted some time, a little wine diluted with water and mucilage will sometimes be advisable. The drink should be always lukewarm.

When the patient begins to recover, his appetite sometimes outstrips his digestion, and care must, consequently, be exercised, not to exceed a very moderate quantity of food, even where the appetite is keen, for if too much be indulged in, the

weakest organ suffers increased irritation, and a severe relapse invariably follows.

The horizontal posture and perfect rest must be constantly observed, and the greater the irritation the more requisite they are. The patient ought not to give way to the frequent inclination to stool, but stifle it as much as possible. The stools must be immediately removed from the patient's chamber, which should be freely ventilated at all times, and frequently sprinkled with vinegar. In malignant dysentery, the patient should void his motions into a vessel half full of water, to which a tea-spoonful or two of the concentrated chloride of lime has been added: this removes all smell instantly, and destroys infection. In such bad cases, the diluted chloride must be sprinkled over the apartment twice a day, (see page 200.) It is advisable also to bury the motions when the disease is malignant, as the effluvia arising from them has been known to give the disease both to men and animals, even after they have been deposited in the usual receptacle.

During convalescence, flannel should be constantly worn next the skin, and the most scrupulous attention be paid to avoid dews, damp night air, and sudden atmospherical vicissitudes, more especially in hot or unhealthy climates.

And after leaving off other medicines, the patient should take an infusion of simarouba bark or quassia, with or without a little nitrous acid and opium, to give tone to the bowels, which should be continued till they have recovered their vigour. This combination of the simarouba infusion and nitrous acid is often of great utility as a restorative in the decline of the disease.

Take of nitrous acid, a drachm; infusion of simarouba bark, eight ounces; tincture of opium, forty drops —Mix, and let one fourth part be taken three times a day.

It must be the *nitrous* acid, and not the *nitric*, which has not the same effect.

If pain and irritation are still occasionally felt, four or five grains of the compound ipecacuanha powder may be taken when the pain calls for it.

In *chronic* dysentery, (that is, the protracted species of the disease, in which the acute inflammatory symptoms have subsided, or been subdued,) our objects are nearly the same as in the acute variety, only we are called upon constantly to remember, that debility is invariably associated with this form of the complaint, and therefore every proper means of preserving and increasing the general strength must be employed. Of all the remedies yet discovered for chronic flux, calomel and opium in combination are, undoubtedly, the safest and the best. Many patients, tormented for a long time by this painful malady, have

been speedily relieved, and ultimately completely cured, by this invaluable medicine. It is equally adapted to the protracted dysentery so often met with in hot climates, and to that of colder regions. An old medical acquaintance of mine, who had this disease dreadfully severe, while attached to the British army of occupation in France, was perfectly cured in a short time by this medicine alone, after the numerous expedients previously resorted to by almost the whole medical staff had entirely failed. The following is an eligible form of exhibiting this combination:

> Take of calomel, ten grains; Turkey opium, in powder, five or ten grains; James's powder, or antimonial powder, twenty grains. Rub them well together, then form them into a mass with aromatic confection, and divide it into ten pills. One should be taken directly, and repeated every night and morning till the severity of the symptoms is overcome, when its repetition every night will be sufficient.

If the exhibition of the preceding pills should not be followed by satisfactory results, the union of Dover's powder and calomel may be very serviceable. A grain of calomel and three or four grains of Dover's powder may be made into a pill, with a little aromatic or opiate confection, and taken twice or thrice a day.

The mixture of nitrous acid and simarouba bark, noticed above, is likewise often useful. This medicine may often be given with great advantage after leaving off the mercurial remedy, to give tone to the bowels, and perfect the cure.

Some physicians say they have found a combination of charcoal powder and Dover's powder very useful in the chronic form, and others speak favorably of the sulphate of copper. The latter medicine is given in doses of half a grain, gradually increased, if necessary, to one or two grains, with half a grain of opium, thrice daily.

The diet in chronic dysentery must, of course, be mild, unirritating, and chiefly farinaceous. A very excellent diet here is flour and milk, well boiled together, which, with a very little sugar and spice, is highly relished by the debilitated patient.

The patient must constantly wear a flannel bandage round the bowels, and keep the feet and legs warm by wearing woollen stockings and drawers.

If, after the subsidence of the dysentery, there remains a sallow hue of the complexion, tenderness on pressure in the right side, and a clayey appearance of the excrement, take the pill No. 112, page 123, or No. 99, page 120, every night, a teacupful of lime-water thrice a day, and be very attentive to daily exercises, and to friction over the region of the liver and bowels.

OF EAR-ACHE.

Some persons are much troubled with ear-ache on exposure to cold, which usually depends on a natural weakness of the organ, or an unnatural susceptibility imparted to it by disorder of the digestive organs. In such a state, a little cotton should be loosely worn in the ear to defend it from the external air, and every appropriate means be taken to strengthen both the part and the general constitution, by means of frequent washing with cold water, cold bathing, and the employment of those measures calculated to amend the general health.—See *Disorder of the General Health.*

Treatment. Sometimes ear-ache is connected with chronic ulceration in the internal or external part of the ear, when injections of warm water and soap are advisable. In this case, there is sometimes a constant fetid discharge, for which an union of Peruvian balsam with ox-gall has been recommended by Dr. Hugh Smith:

Take of ox-gall, three drachms; balsam of Peru, one drachm.—Mix. A drop or two to be put into the ear with a little cotton.

For the treatment of an accumulation or deficiency of wax, see the article *Deafness.*

In all chronic affections of the ear, a soothing plan of treatment is the best; and it should be particularly remarked, that this organ will not bear tampering with, as from its vicinity to the membranes of the brain, improper or irritating applications are frequently dangerous.

But pain in the ear may be so severe as to indicate the presence of inflammation, which will be known by the accompanying frequency and hardness of the pulse, and the presence of fever. An acute disease will then demand our attention, and will require bleeding, by means of leeches applied near the part affected, or by the use of the lancet, followed by warm fomentations, blisters behind the ears, and the saline purgative, No. 73, page 114. The employment of leeches will generally be sufficient, and the diet should be confined to simple farinaceous decoctions of barley, grits, &c.

But one of the best modes of treating this disease, is by exhibiting an emetic, combined with a purgative medicine. This will often cure ear-ache far more certainly and more speedily than blood-letting, blisters, fomentations, or any other means; and the reason is, that this complaint generally originates from derangement of the digestive organs, which the emetico-purgative medicine is eminently calculated to correct. For this pur-

pose, thirty grains of ipecacuanha powder, one grain of tartrate of antimony, and three grains of calomel, may be taken together in a little treacle, and followed by a free draught of luke-warm water. This may be repeated twice, or thrice, if necessary. Dr. James Kennedy affirms, that he has treated twenty-five cases of this disease, in this manner, with uniform, rapid, and complete success.

If the patient thinks the preceding too severe a course, let him take the pill, No. 98, page 119, every night, with the sarsaparilla pills, or the pills, No. 104, page 121, during the day.

Now and then the pain spreads from the ears over the whole, or a great part of the head, attended with high fever, giving us reason to suspect that the inflammation has extended to the brain; delirium not unfrequently follows, and the disease becomes dangerous. The most powerful local and general means must now be combined, and the proper course to be pursued will be found under the head of *Inflammation of the Brain.* It is a fortunate circumstance, however, that the most violent forms of inflammation of the ear more frequently terminate in suppuration than in death; and if the brain has partaken of the inflammation, the suppuration in the ear generally relieves it.

Should suppuration occur, matter will be discharged for some time, when the simplest and mildest injections only ought to be employed, to keep the parts clean, and promote the healing of the ulcer, as soap and warm water, or from five to ten grains of sulphate of zinc dissolved in a pint of rose water, to be used lukewarm.

OF EPILEPSY, OR FALLING FITS.

This is a disease consisting of paroxysms of convulsion, returning at uncertain periods, accompanied by an abolition of sense and voluntary motion, and ending in somnolency, or complete sleep.

Its attacks are sometimes sudden, when the patient falls at once to the ground in a state of utter insensibility; sometimes they are preceded by certain premonitory symptoms, such as languor, pain or giddiness in the head, drowsiness, dimness of sight, and ringing in the ears, &c. In the fit, the involuntary muscular power is often excessive; the body is bent forwards, or drawn backwards with great force; the eyes roll furiously; the lips are convulsed, and covered with a frothy saliva; the tongue is thrust violently from the mouth, and is sometimes shockingly lacerated; the pulse is irregular; the breathing oppressed, and occasionally highly laborious; and in some cases, bilious matter in large quantities is ejected from the

stomach. These *symptoms* sooner or later gradually give way, and the unhappy patient falls into a profound sleep.

The paroxysms vary greatly in degree, duration, and period of return, in different cases.

The most frequent *causes* are irritation in the stomach and intestines; a diseased state of the spinal marrow; sudden fright; excessive grief; great loss of blood; the suppression of accustomed discharges, or cutaneous eruptions; the action of mineral poisons; excess in drinking; and the imprudent use of calomel.

On the dissection of those who have died apoplectic, various diseased appearances have been observable, chiefly within the head, such as tumours, effusions, indurations, and marks of disorganization in some part of the brain. M. Wenzel, Professor of Anatomy in the College of Mayence, who has had great opportunities of instituting anatomical examinations in this disease, says, that in a very great proportion of the heads he examined, he found the cerebrum* in a healthy state, but the cerebellum† uniformly, and in a very extraordinary degree and manner, diseased. But after the most careful examinations, the inquiry perpetually recurs, whether we are to consider the diseased appearances present as the cause or consequence of the disease. I incline to the latter opinion; and it is certain that in many cases of epilepsy no mark of disease whatever could be found in any part of the body.

The involuntary laughing or weeping, and the sensation of a globe rising in the throat, which accompany hysterics, will sufficiently *distinguish* this disease from epilepsy. For the signs distinguishing it from APOPLEXY, see that article.

TREATMENT. The most powerful remedies in epilepsy are, the ammoniate of copper; flowers of zinc; leaves of the orange tree; misseltoe; lady's smock; setons or issues; and a strict regard to the diet and regimen proper for the case. Dr. Cullen, the celebrated Professor at Edinburgh, was very partial to the ammoniate of copper, and numerous cases are on record in which it was successfully employed. Dr. Beattie says, "it seldom fails to cure epilepsy; never, if the disease be idiopathic,‡ and the patient not exhausted."

Take of ammoniate of copper, twenty grains; bread crumb, and mucilage of gum arabic, a sufficient quantity to form it into a mass; which is to be divided into forty pills. In the beginning, one of these is to be taken three times a day, and gradually increased to two, or even three pills, thrice a day.

The flowers of zinc were once in high repute in epilepsy, and

* The larger and upper portion of the brain.
† The small portion of the brain, situated at the base of the head.
‡ A primary disease, not depending on another.

in all other spasmodic complaints; but they have suffered of late, like every other medicine, from druggists having frequently sold a bad article. The dose is three grains, made into a pill with extract of gentian, twice or thrice a day, which may be increased to six or seven grains. These preparations of copper and zinc may be given alone, as now directed, or each dose of either medicine may be combined with three grains of camphor, which Dr. Cullen thought capable of increasing their virtues.

The leaves of the orange tree have been little used in this country, but have been an esteemed remedy on the continent, having been used at the Hague, and in the hospitals of Vienna, with evident advantage. M. Locker administered this medicine in the hospital of St. Mark to a great many epileptic persons, and found it superior, he says, to the most celebrated remedies, all of which he had tried. The dose is from a scruple to a drachm of the powder, three times a day. The powder of misseltoe is an ancient anti-epileptic, and is frequently of great service. Boerhaave, Van Swieten, Dr. Willan, and other celebrated physicians, have employed it with success. The dose is the same as that of the last article.

The lady's smock enjoyed the confidence of Sir George Baker, and Ray mentions it in his letters with approbation. A Cornish clergyman, of the name of Gregor, has observed, that the flowering tops of the lady's smock had been used by his family for some generations in the cure of epilepsies. They should be gathered in June or July; and the dose is a scruple twice a day, which should be increased by degrees to a drachm, or a drachm and a half.

Dr. Pritchard, of Bristol, very properly remarks, that a seton, or issue, in the neighbourhood of the spine, should never be neglected in this disease. It is frequently a valuable adjunct to the internal medicine made use of, and is sometimes effectual alone. It seems particularly indicated where there is a preternatural fulness in the blood-vessels of the head.

Beside the above remedies, the nitrate of silver, valerian, nux vomica, thorn apple, and some other medicines, have been occasionally useful; but they are, in my opinion, inferior to the preceding. The nitrate of silver owes the reputation it has lately gained, as a remedy for epilepsy, principally to the support given it by Dr. Baillie. It certainly has been employed with perfect success; and may be administered in doses of from one to six grains, three times a day, made into pills with crumb of bread, and mucilage of gum arabic. Of all the forms of giving valerian, that of the oil would seem to be the most eligible, which is a favorite medicine for this complaint in Germany.

The tincture of nux vomica is strongly recommended by Dr.

Löbenstein Lobel, a German physician, in that species of epilepsy which appears on the cessation of the menses. He says, that, in such cases, he has given it with uniform success, commencing with sixteen drops, every three hours, and increasing it gradually to twenty-five drops or more.

The oil of turpentine is another medicine much used by some physicians; and is particularly indicated in cases of epilepsy depending upon the presence of worms, and other sources of intestinal irritation. The proper dose is from two drachms to an ounce occasionally, made into an emulsion with cinnamon water and mucilage.

Many of the ancient authors had great faith in the virtues of cinnabar, hence it acquired the name of *magnes epilepsiæ*. Some German physicians of the present day, regard it almost as a divine remedy, and in a recent number of *Hufeland's Journal*, it is much praised in the following form.

> Take of factitious cinnabar, oxide of bismuth, and herb tobacco, of each, a scruple; extract of aloes, five grains.—Mix them well, and divide the mass into twenty pills; one of which is to be taken twice a day.

The external application of opium is sometimes worthy of trial. A young lady was brought to M. Portal, an eminent Parisian physician, who was every day attacked by violent epileptic fits, which began in one of her toes; this circumstance suggested to him the idea of cutting the nerve, for the purpose of interrupting the communication: but he began by the application of opium to the nerve, and that alone proved sufficient to effect a complete cure. The use of the opiate liniment, No. 39, page 105, is very useful in case of a furious state, which sometimes supervenes a fit in strong robust habits. It soon effects a calm, and induces sleep. A combination of genuine musk with opium, as an internal medicine, is likely to prove very valuable in some cases of epilepsy.

Electricity is reported to have been resorted to with considerable benefit, in some bad cases of epilepsy. Galvanism has also been strongly recommended in a work published by Mr. Mansford, surgeon, at Bath. Though much cannot be said in favour of either of these remedies, yet, when other means fail of success, we may with propriety make a trial of them. Dr. Esquirol, of Paris, effected a cure in a case of epilepsy, depending upon a morbid affection of the spinal marrow, by repeated applications of moxa to the spine.

A new remedy for epilepsy has lately been tried on the continent, by Dr. Burdach, of Triebal, and Professor Hufeland, of Berlin, consisting of the roots of the common mug-wort, (*artemisia vulgaris,*) dried in the shade, and, a short time before

it is used, powdered. The dose is from fifty to seventy grains, or a large tea-spoonful, of the powder, in a little warm beer, about half an hour before the expected attack. The patient should then be placed in a bed, well covered, and drink warm beer. The first dose, it is said, generally gives some relief, and sometimes performs a complete cure; but the dose should be repeated every other day. Out of ten cases treated by Professor Hufeland, three were perfectly cured, and three greatly relieved. The other four did not experience much benefit. One of this physician's cases is very striking: a girl aged seventeen, had had a fit every day for ten or twelve years, in consequence of a blow on the head:—she was quite cured by a single dose. A man, aged twenty-nine, who had had fits for years, was quite cured by two doses. Since the publication of the second edition of this book, it is said that Dr. Borie, the physician of the hospital at Versailles, has for some time been very successfully exhibiting mug-wort in cases of epilepsy. A drachm was given four times a day, by Dr. Home, of Edinburgh, to a woman who had been affected with *hysteric* fits for many years: the fits ceased in a few days. In this patient, assafœtida and ether had been given to no purpose.

The following prescription has perfectly succeeded in a very severe case of epilepsy occurring in a strong young man in the author's connexion, and it has also been effectual in at least two or three instances reported to him:

> Take of oxide of zinc, half a drachm; powder of squills, a drachm; gum assafœtida, a drachm and a half.—Mix, and divide into thirty six pills, of which take one pill three times a day in the beginning, and gradually increase the dose to two pills thrice daily.

In debilitated habits, the cold bath is an advisable assistant. The cold affusion to the head is more generally applicable, and frequently more beneficial. When the disease is the consequence of onanism, or excessive indulgence of the venereal appetite, the affusion of cold water on the head, and organs of generation, should not be neglected.

When the disease appears to have been occasioned by excessive evacuations, we should endeavour to restrain them; when by suppressed discharges, they ought, if possible, to be restored. In the latter case, blisters, issues, the warm bath, and diaphoretics, are the best remedies. If the piles are suppressed, leeches should be applied to the anus, and aloetic purgatives administered.

Blood-letting is a common resource among professional men in the present complaint; but is much oftener injurious than beneficial. In epilepsy connected with general weakness, it is clearly improper; and when there exists a great fulness of

blood, it is rarely of any service. I have known it resorted to in very many instances of this last species, but do not recollect a single example in which it was of advantage, while several of the patients were manifestly injured by it. The plethora sometimes associated with the disease, is much more safely and effectually reduced by a spare diet, and purgatives, than by bleeding.

Attention to diet and regimen is here of great consequence. If the malady be connected with, or dependent upon, debility, the diet should be generous and nutritious; but to avoid irritation, the quantity must be small. For instructions as to the quantity and quality of the food, see *Indigestion.* In strong robust constitutions, the diet should be spare; and if the habit be very plethoric, a total abstinence from animal food, and strong drink, will be highly necessary. Such a course has proved of great service to plethoric epileptics.

The observance of early hours is valuable, and horse exercise is much to be recommended. The bowels should be carefully regulated: for this purpose, the weak and delicate ought to make use of a mild pill, as No. 100, or 101, page 121; but those of a full habit had better employ the saline aperients, as No. 67, or 68, page 114. It has been wisely suggested that the patient should make an entire change in his habits, which is a practice worthy of general adoption. I have known several epileptics in whom the disease has ceased spontaneously, after an ineffectual trial of various medicines, which occurrence has probably followed some unobserved, though to them important, change in their general mode of living.

When the fit is actually present, the patient should be placed on a bed or sofa, the head somewhat raised, and those parts of the dress removed that are likely to press upon the vessels of the neck. In order to prevent the tongue being injured by the spasmodic action of the muscles of the jaws, a piece of soft wood, or a napkin properly rolled up, should be introduced between the teeth. It was formerly the practice to apply acrid stimulants to the mouth and nose, but these are now generally condemned.

This disease arises from so many different causes, that patients should not be discouraged, if, after a trial of various medicines, they find no benefit; for those remedies which, generally speaking, we consider somewhat inferior in their powers, will occasionally surprise us by their admirable effects; and in so distressing and dangerous a complaint as the present, no possible means of cure should be left untried. If all the foregoing measures fail, and the patient is much debilitated, I would recommend a trial of the inhalation of oxygen gas, which is

another remedy, among the many, that have now and then been successful.

I have above laid before the reader, a brief account of the best remedies for Epilepsy, in use among physicians; but there is one remedy still unnoticed here, and which, notwithstanding it is not in use among professional men, it would, with my views and feelings, be very reprehensible in me to pass by unheeded and unenforced. Whilst this disease has in all ages been regarded as one of the most afflictive of human maladies, it has likewise been acknowledged to be one of the most intractable under the hands of the physician. How often is it that he here employs one remedy after another, and urges one plan after another, through a long succession of months or years, and all in vain! Then why should not *a direct especial* appeal be made, under such painful and peculiar circumstances, to HIM who is the great first cause of all good, the centre and source of all power and blessedness? When all secondary causes fail us, can it be either unreasonable, or unseemly, to go straight to the FIRST CAUSE of all things? Indeed, is not this the proper course pointed out to us by GOD himself in His word, suggested by many remarkable facts and deliverances met with in the history of mankind, and enforced by our SAVIOUR's express declaration, "*This kind goeth not out but by prayer and fasting.*" *Matt.* xvii. 21. The physical condition of the persons, in reference to whose cure, the REDEEMER uttered these memorable words, appears to have been very similar to, if not exactly the same with that of epileptics; for it is said in the 15th verse of the same chapter, "*My son is sore vexed: for ofttimes he falleth into the fire, and oft into the water,*" which is precisely the case with those afflicted with epilepsy, and with no other diseased persons. If I did not give full credit to the value of medical science, I should not have appeared as the author of medical books; but I am, nevertheless, assured, that it is the will of HIM from whom cometh every good and perfect gift, that, in certain cases, the cure of even bodily diseases should be sought by extraordinary means; sufficient intimation being very frequently given by HIM, that there are instances, (and those not a few,) in which we must entirely leave the creature for the CREATOR, and depend absolutely on the arm of His omnipotence. Probably some persons will look on this as "too hard" a saying, and will not receive it; but if so, while it is a subject of regret to me, I cannot do otherwise than remark, this is no more than what the world is daily a witness to, in respect to matters of far superior moment, and their unbelief cannot make either the faithfulness of GOD, or the faith of those who believe in HIM, of no effect. Let it ever be remembered, that commonly, in this

way at least, those only witness great deliverances who make great ventures, and are humbly bold in laying hold of superior strength, and there is as little reason as religion in man's putting his ability on a parallel with GOD's,—in his prescribing one way when GOD requires another,—or in his wilfully shutting his eyes against the express declarations and promises of INFALLIBLE TRUTH. I would, therefore, urge those afflicted epileptics, who have tried medicine without avail, to attend to the directions of the Apostle, *James* v. 14, 15. "*Is any sick among you? let him call for the elders of the church; and let them pray over him, anointing him with oil in the name of the Lord: And the prayer of faith shall save the sick, and the Lord shall raise him up.*"

And in order to encourage such in this matter, I will here refer to an instance or two of success. It should, however, be particularly noticed, that ordinary prayer, or reading of prayers, is not likely to gain the desired object; unhappily, the prayers of the generality do not reach half way to heaven, as is evidenced by their languor and inattention; but those who *mightily wrestle* with God, as Jacob did, *Genesis* xxxii. 26; *Hosea* xii. 4; *Jonah* iii. 8; are likely to prevail, for such prayer moves the hand that moves the world. The following interesting extract is from the *Memoirs of the Rev. Vavasor Powell, p.* 25, a man remarkable for the holiness of his life, and the earnestness of his prayers:

"One Mrs. Watkins, of the parish of Lannigyn, in the county of Brecknock, a gracious gentlewoman, having kept her chamber and bed, as was reported, for two years, hearing that I was come into these parts, sent for me to come and visit her, she having, it seems, some faith, that if I prayed for her she would be healed. The next morning she went between two and three miles on foot, to hear me preach. At another time, Elizabeth Morris, of New Radnor, a religious young woman, having the falling sickness, or convulsion fits, which took her many times in one day, one night being at family duty, at a brother's house in town, while I was speaking, she fell into one of her fits; but prayer being instantly made for her, she recovered before the prayer was ended, and for many years had no more fits; and, I think, hath not been troubled at all since."

Fleming, in his *Fulfilling of the Scriptures, part* 1, says, (and this may be seen also in *Gillies' Historical Collections, vol.* i. *p.* 292,) in referring to Robert Bruce, a very eminent minister in Scotland, about the year 1600:

"I had it attested by sober and grave christians, who were familiar with him, that divers persons distracted, and of those who were passed all hopes of recovery in the falling sickness, were brought to Mr. Bruce, and after much prayer by him in their behalf, were fully recovered: this may, indeed, seem strange, but it is also true. Mr. Bruce was a great wrestler, who had more than ordinary familiarity with God. If

there were a full collection of these remarkable passages, which have been known to others in his life, it would further witness what an extraordinary man he was. I shall close this with the testimony of the learned Didoclavius, in the preface to his ALTARE DAMASCENUM: *Robertus Bruisius, vir genere et virtute nobilis, majestate vultus venerabilis, qui plures animarum Millia Christo lucriferit, cujus anima, si ullius mortalium, abest verbo invidia, sedet in celestibus. Animæ meæ, cum anima tua, Brusi, si ex alieno fide esset pendendum.*"

In *Calamy's Life of Baxter*, and also in *Gillies' Historical Collections*, vol. i. p. 269, we meet with the following authentic account;

"One Mrs. Giles had a son of about fourteen or fifteen, who, upon the removal of a fever, fell into a violent epilepsy, and had four or five violent fits in a day, in which they were forced to hold a key between his teeth, to save his tongue. The physician used all ordinary means for a long time, in vain, but at last the people of the town, at her request, kept a day of fasting and prayer at her house; and the second day he was suddenly cured, and never had a fit afterwards. One Mr. Cook, removing from Kirvan to Kidderminster, and meeting with difficulties in his temporal concerns, fell into a melancholy, which afterwards turned to madness. He continued in it several years; the best means being used to little purpose. Some proposed fasting and prayer on his account, but Mr. Baxter discouraged it, having no hope of cure, his distemper being natural or hereditary to him; his father having much about his age, fallen mad before him, and never recovered. When he had continued in this condition ten or twelve years, some would not be dissuaded, but fasted and prayed at his house with great importunity; and continued it once a fortnight, for several months: at length he sensibly mended, and by degrees finally recovered."

OF ERUPTIONS ON THE SKIN.

Under this head I include all common rashes, and those eruptions on the whole or a part of the general surface of the body, which are without a distinct title, or which it is not necessary to treat of distinctly in a work like the present.

The common rashes which appear in blushing patches, gradually deepening to a rose-colour, often alternately fading and reviving, and appearing chiefly on the cheeks, neck, or arms, are troublesome, but of no other importance. They require attention to the state of the digestive organs, and the regulation of the bowels by the occasional use of the aperient pill, No. 100, or 101, page 121, together with the administration of the nitric acid mixture, page 385, will generally be sufficient to remove them.

Those rashes which are attended with small pimples, and a painful itching, are still more troublesome than the last, and will require more careful attention to the correction of disorder in the stomach and bowels, by the use of alteratives, and a proper diet and regimen. The body must be kept cool, and

the bowels gently open by the pill, No. 97, or 100, by the mixture, No. 73, page 114, or by the electuary, No. 37; the diet consisting chiefly of wholesome vegetables, and ripe fruits, with fresh animal food. The use of the pill, No. 98, or 99, every night, or every second night, with half a drachm of sarsaparilla powder, in water, twice a day, is an excellent plan, the tepid bath at ninety-seven degrees being employed thrice a week. The extract of dandelion is sometimes extremely beneficial. The following mixture also is sometimes useful in these, and all other cutaneous eruptions.

Take of ipecacuanha wine, three drachms; flower of sulphur, one drachm; tincture of cardamoms, one ounce.—Mix: one tea-spoonful to be taken twice a day, in a wine-glassful of water.

In obstinate cases, sea-air, and sea-bathing, or the internal use of Harrowgate water, are very advisable; and the compound decoction of sarsaparilla, with a couple of drachms of antimonial wine to each pint, is sometimes useful.

The red, hard, distinct, stationary pimples, so frequently seen in the face of different individuals, are the consequence of a sympathy of the small excreting vessels of the part affected, with a disordered condition of the stomach and bowels. If they will yield to medical treatment, sudorifics and alteratives internally, with some local stimulant at the same time, are the most efficient remedies. Dr. Mason Good recommends ten or fifteen grains of the compound powder of ipecacuanha, to be taken at bed-time for several nights in succession, the part affected being at the same time wrapped in flannel. If this is not effectual, the pill, No. 117, page 124, taken twice a day, with ten grains of camphor, may be tried, the pimples being anointed twice or thrice a day, with the strong liniment of ammonia, No. 45. Dr. Darwin, in the *second volume of his Zoonomia*, has a copious collection of cases of this complaint, with the means employed for their cure, which it may be worth the while of the afflicted reader to turn to. Among the rest, is that of "Miss L. a young lady about eighteen, who had tried a variety of advice for pimples over the greatest part of her face, in vain. She took rhubarb, five grains, and emetic tartar, a quarter of a grain, every night for many weeks, and blistered her face by degrees all over, and became quite beautiful." These red, stationary pimples in the face, form a complaint called by professional men *gutta rosea*, and are often a source of much disgust to the female part of society. *Gowland's lotion* is a favorite remedy for their removal; but, as it is a solution of corrosive sublimate, it is by no means safe; the above means will be found more permanently beneficial without being dangerous.

The *grog blossoms* of hard drinkers can be radically cured only by a return to habits of temperance, with the persevering employment of the means just noticed.

The red discharging pimples occurring on the chin, and about the mouth, are a symptom of some internal disorder, and may almost invariably be removed by the use of the sarsaparilla decoction in the day, and the alterative pill, No. 98, every other night. The solution of oxymuriate of mercury, *(liquor hydrargyri oxymuriatis,)* in doses of from half a tea-spoonful to a tea-spoonful, twice a day, in water, is likewise very beneficial. For these, and, indeed, most other kind of pimples, sulphur internally is an admirable medicine, and the following lotion may be used externally with great advantage, see page 69.

Take two drachms of Prussic acid; six grains of the oxymuriate of mercury; half a pint of emulsion of bitter almonds.—Mix for a lotion, to be used twice a day.

This lotion is particularly useful in allaying the troublesome itching, so often attending eruptions of this description.

For chronic affections of the skin which appear in distinct patches on the hands, arms, neck, or any other part of the body, and which generally show more or less of a scaly appearance, the following ointment will be found useful as a topical application, with which one of the preceding alterative medicines should be taken internally.

Take of ointment of nitrate of mercury, two drachms; saturnine ointment (page 118) six or eight drachms.—Mix, and apply night and morning, on a piece of linen rag.

The vapour bath is sometimes an effectual remedy in cutaneous eruptions of every kind, and should be tried in all obstinate cases. It may be used about once a week.

The red gum, and other eruptions on the skin of infants and young children, are usually the effects of acidity, or other disorders in the stomach, and are best treated with absorbents, and gentle aperients occasionally. An absorbent powder of magnesia and gum tragacanth in powder, and the aperient, No. 121, page 125, will be proper. The whole surface of the body should be kept clean, and be frequently washed with lukewarm water. If any imprudent exposure to cold should suddenly drive in the eruption, the child must be immediately plunged into a warm bath at about one hundred degrees, which is commonly sufficient to reproduce it.

Almost all cutaneous eruptions, and foulness, depend upon a vitiated condition of the digestive organs, and, therefore, the most efficient remedies for them are those which tend to alter this condition, and have, at the same time, the power of relaxing

the skin; such as preparations of antimony and calomel, of ipecacuanha, sarsaparilla root, dandelion, nitric acid, and the other means above recommended. The common exciting causes of these evils are sudden chills from drinking cold water, or eating cold vegetables; catching cold in the feet; excess or imprudence in diet; constipation of the bowels, and other causes of derangement of the stomach.

OF EXCORIATIONS.

The best treatment of common excoriations, consists in dressing them with the saturnine ointment, No. 94, page 118, or with the simple ointment, No. 88, or with Turner's cerate, No. 95. If there is much inflammation present, the cooling lotion, No. 68, or 69, page 113, may be first used, and afterwards the ointment. Should the excoriation appear to depend upon constitutional causes, internal medicine likewise will probably be necessary; when the sarsaparilla decoction, or the compound extract of sarsaparilla, or the quinine pills, No. 115, page 124, in the day, and the alterative pill, No. 99, every night, will be found a valuable plan.

The excoriations of infants are effectually treated with Goulard water, No. 69, or by dusting a little flour, or calamine powder, over them twice a day. Washing with cold water is also a good practice.

OF FAINTING, OR SYNCOPE.

In fainting, the motion of the heart and lungs becomes feeble and imperfect, the sensibility and perception are diminished, the pulse is small and weak, the voice uniformly lost, and the face pale. It may occur suddenly and accidentally, ceasing without any tendency to recurrence; or it may recur at periods more or less regular, with occasional palpitation of the heart during the intervals, and impeded respiration during the fit.

The usual *causes* are fatigue; long fasting; sudden loss of blood; acute pain; overwhelming emotions of the mind, and excess in diet. It may arise also from some structural disease of the heart, or the large arteries issuing from it; and where the returns are frequent, and during the paroxysm, the breathing though feeble, is anxious and obstructed; the face livid, with a tendency to restlessness, and without any ordinary exciting cause, as unusual exertion or emotion, being evident, we may with propriety suspect some such lurking mischief.

TREATMENT. In common cases it is only necessary to place the patient in a recumbent position, to apply ammonia, strong

vinegar, or any other pungent odour to the nostrils, and to use friction to the arms and legs. When the patient is capable of swallowing, a little wine, or brandy and water, should be administered; and the occasional causes should be sedulously avoided in future. If the syncope frequently returns, one or two of the aperient pills, No. 100, page 120, should be given every other night, with some tonic medicine in the day, such as the pills, No. 102, 103, or 104, or the mixture, No. 79, 82, or 83. Cold or tepid bathing may also be resorted to, with exercise, regular hours, and light meals; in short the patient ought to attend to the advice given at page 307.

When we have reason to suspect some organic impediment about the heart, occasional small bleedings may be advisable, together with five or ten grains of extract of henbane, twice a day; and the alterative pill, No. 99, page 120, every other night, at the same time, will be sometimes useful. The following pills are a valuable medicine in cases of frequent fainting fits.

Take of extract of henbane, one drachm and a half; ipecacuanha, in powder, twelve grains; camphor, half a drachm—Mix, and divide into thirty pills. Two to be taken three times a day.

Tranquility of mind and body, an abstinence from all stimulating food, and a regular state of the bowels, should be constantly observed.

OF FEVER.

Under the term fever is comprehended a very important class of diseases, one very liable to be misunderstood, especially by unprofessional persons, and in which the patient is often indifferently or improperly treated. There are no cases in which a clear insight into the *nature* of the malady, may be of more essential service to the patient, and none in which unprofessional persons at a distance from an able medical practitioner, feel more sensibly the want of a skilful guide. I therefore hope my introducing here a brief, and what I trust, will prove a clear view of the *nature of fever*, its *real differences*, and *the proper objects of treatment*, will constitute a valuable addition to the present edition of this book. *Inflammatory*, *typhous* fever, &c. are treated of under their several titles, but I believe the present remarks will enable the intelligent unprofessional person to take a somewhat comprehensive view of the nature of the disease, and thus enable him, if he cannot gain advice to be depended on, to prescribe with judgment and effect.

Nature of Fever. It seems undoubted, that the primary

morbid condition of the body in fever, consists of an affection of the nervous system, which there is reason to believe is of a *peculiar* and *specific* nature, although that nature be at present unknown. This peculiar affection of the nervous system, having continued for some time, brings the vascular system into a morbid state, and this state passes, sooner or later, into true inflammation. The reader will thus perceive, that the second marked and important event that commonly takes place in fever, is inflammation; and to this we have especially to refer in the treatment.

The events which *invariably* concur in fever, are a certain deviation from the healthy state in the nervous and the mental functions; a certain deviation from the healthy state in the circulating function; and the same deviation from the healthy state in the functions of secretion and excretion, such are the secretions from the bowels, liver, skin, &c. It appears there must be a deviation in these three circles before fever can exist; and that the *order of events* is as here stated, the functions of the brain being first disturbed, then those of the circulation, and lastly, those of secretion and excretion.

There is a real difference between fever and inflammation, as will appear from the following remarks: In inflammation some of the phenomena are the same as above; but the order in which they concur is not the same; and this affords a clear and universally applicable mark of distinction between fever and inflammation. In acute inflammation there is a similar derangement in the secreting and excreting functions; there is also sometimes a similar disorder in the circulating functions; but the disorder in the nervous and mental functions is seldom if ever similar;—the derangement that does take place in these latter functions, while it is apparently different in kind, is certainly and invariably different in the order of its occurrence. In inflammation of the lungs, for example, the earliest indications of disease that can be discovered have their seat in the affected organ itself; and it is only after the disease has made some progress that other organs and functions are involved; and apparently the last to be involved, and certainly the least to suffer, is the nervous system. In fever we have seen it is the reverse.

There is solid ground for the statement, that fevers, whether called inflammatory, nervous, bilious, typhous, scarlet or yellow fever, &c. should be viewed as one great and extensive malady never differing materially in nature, but in every two cases differing in intensity, and giving rise, by these differences in intensity, to various forms of disease, and thence requiring sometimes great difference in the treatment. There are but

two *genera* or *orders* of fever, viz. the highly inflammatory also called *synochus*, and the nervous or *typhous* fever. In all fevers, the diversity in the symptoms in different instances chiefly arises from the acute or sub-acute character of the disease, and from the particular organs principally affected, as the brain and spine, the chest, or the digestive organs; and thus every possible form of fever may be ranged under one or other of the following genera and species:

GENUS 1. HIGHLY INFLAMMATORY FEVER:

a. With either *acute* or *sub-acute affection of the brain and spinal chord.*
b. With either *acute* or *sub-acute affection of the chest.*
c. With either *acute* or *sub-acute affection of the abdominal organs*, the bowels, liver, &c.
d. With *mixed affection of all these organs.*

GENUS 2. TYPHOUS FEVER:

a. With either *acute* or *sub-acute affection of the brain or spinal chord.*
b. With either *acute* or *sub-acute affection of the chest.*
c. With either *acute* or *sub-acute affection of the abdominal organs.*
d. With *mixed affection of all these organs.**

GENUS 1. The general symptoms of a mild attack of highly inflammatory fever (SYNOCHUS), with their order of succession, may be stated thus: Loss of mental energy; lassitude; an uneasy restless sensation quite peculiar to the febrile state; pain in the back, loins, and limbs; change of countenance, appearing dejected and pallid; chilliness although the temperature is high; languid weak pulse, sometimes quicker than natural, at other times slower; short and quick breathing. After awhile, the pulse becomes fuller, stronger, and generally quicker than natural; increased heat of skin; the mouth now becomes dry and parched; the tongue is covered with fur; thirst comes on; secretions from the bowels are deranged; dryness and harshness of the skin. Pain of the back and loins increases; the fever is now fully formed, and any thing more that happens is referrible to degree and duration.

As soon as the heat comes on, pain is felt in the head, but sometimes there is only a giddiness. There is increased sensibility in the eye, ear, and skin; the sleep is disturbed and un-

* The *mixed form* of fever, in which the organs of the head, chest, and abdomen appear to be equally involved in the disease, the general affection being intense, is by far the most dangerous form.

refreshing, or absent; pulse eighty, ninety, or one hundred. There is always loss of appetite.

The disease in this form generally terminates favorably. If it does not, then about the end of the second week, instead of improving, the patient grows weaker; lies prostrate in bed, and sinks exhausted. The return to health is almost always denoted by longer and more tranquil sleep. If the pulse now becomes less quick, and *intermittent*, it indicates a sure and steady convalescence.

The symptoms of SEVERE SYNOCHUS, with SUB-ACUTE affection of the brain are,

1. At the time when pain in the head diminishes in the milder form of synochus, it increases in the severer form. Still the pain is often not severe. It is not uncommon for the most unequivocal and extensive changes of structure to take place in the brain and its membranes, without severe pain having ever been felt. Sometimes no pain is present: then giddiness is its substitute. This in the commencement, and in the early stage of fever, is as certain a sign of affection of the brain as pain.

2. The dull and heavy expression of the eye is greater than in the milder form of synochus.

3. There is usually a great increase of the general sensibility: loud noise and strong light are still more distressing.

4. The expression of the countenance is peculiar. It is indicative of suffering without the strength to bear it.

5. Sleeplessness and delirium are present.

The symptoms may continue without intermission, and with little change, for several days. The period of their duration, when only in this degree of violence, is commonly from eight to ten days: when their character is still milder, or when they have been mitigated by appropriate remedies, it may be protracted to fifteen days. About this time a remarkable change takes place. If the change be for life, sleep returns; the febrile uneasiness is much diminished; the head-ache is greatly relieved; and the skin is cooler and softer. The tongue is improved, &c.; and the pulse slower a beat or two.

If the change be unfavorable, the pain of the head, and the giddiness diminish, and also the pain of the back; but there is a remarkable diminution of the sensibility; the mind is duller, and more heavy; the patient is confused and stupid; there is delirium, or moaning and incessant muttering; the pulse rises, if ninety before, it now is one hundred, and weaker. Now, signs of disease in the chest and abdomen appear; and the tongue is more loaded and dry.

The patient may, however, *(Deo volente)* struggle through this. The earliest sign of recovery is more tranquil sleep; a

good sign is also increase of sensibility; a better still the tongue becoming cleaner and moist; and if the pulse falls, so much clearer is the amendment.

The history of SEVERE SYNOCHUS with ACUTE affection of the brain is precisely the same as in the preceding sub-acute species, excepting that the symptoms are more severe, and their progress quicker.

One of the most remarkable modifications of the pulse met with here is the *slow and intermitting pulse*. Whenever, in the case of fever, a patient is found with intense head-ache or intense pain in the back or loins, and a *slow pulse*, the physician ought to expect unusual severity in the symptoms that are to follow, and if the most active measures are not taken to break the violence of the disease at this early period, it will be beyond all control in a day or two. Frequent and deep sighing is not uncommon in fever with severe affection of the brain, and it is highly characteristic of intense cerebral disease.

In SEVERER SYNOCHUS with AFFECTION OF THE CHEST the symptoms are such as just described, in addition to which we witness pain in the chest, cough, and difficulty of breathing.

In SEVERER SYNOCHUS with *affection of the organs within the abdomen*, if the abdominal affection be severe from the commencement, in addition to the ordinary symptoms of fever, there will be present nausea, sometimes retching, and at other times vomiting. Whenever these occur at the beginning, it teaches us at once where the main force of the disease is probably to be concentrated.

Pain in the abdomen is found in this form, but is sometimes not complained of, unless pressure is used; the tongue is often preternaturally red—the body of the tongue may be loaded with fur, while the edges are vividly red. Purging succeeding to constipation and pain, and remaining after the subsidence of pain, is an infallible indication of abdominal disease. So that the concurrence of nausea, retching, vomiting, and purging in the commencement of fever, is a certain proof that severe abdominal affection is present, which will require prompt and active treatment.

GENUS 2. TYPHUS. The appearance of a person labouring under typhus is so different from that of one affected with synochus, or highly inflammatory fever, that no one ignorant of the disease, who saw these two patients for the first time, would believe that both were afflicted with one and the same malady. Yet the difference arises mainly from a difference of intensity. The following remarks enumerate the principal points of difference.

1. From the very first commencement of the attack, as well as through the whole course of the disease, the prostration of

strength, both physical and mental, is greater in typhus than it is in synochus.

2. The chilliness is, upon the whole, greater and longer continued than in synochus.

3. The febrile uneasiness is greater; the restlessness is incessant; the face is pallid; the features are shrunk; the expression of the countenance is most peculiar, being strikingly indicative of weakness and suffering, from which the experienced eye can tell at a glance, even at an early period, to which of the two types that countenance belongs.

4. The pulse is weaker and more rapid than in the corresponding stage in synochus.

5. When pain is present it diminishes sooner and disappears more completely than in synochus.

6. Delirium is more constantly present than in synochus; muscular tremor also. The tongue is earlier foul, drier, and of a darker colour. Erysipelas and sloughing are common in the progress of typhus.

7. The skin is always of a darker colour than in synochus; the whole surface being of a dull and dusky tinge: sometimes it is covered with petechiæ.

8. Typhus terminates much earlier than synochus, whether favorably or unfavorably.

Typhous fever is the most dangerous form of fever. Its fatality is materially influenced by the character of the prevailing epidemic, and the mode of treatment pursued. Indeed, every kind of fever varies in severity in particular years, and even in particular periods of the same year. The *prognosis* will, in some degree, be influenced by the age of the individual, it being more fatal at some periods of life than at others, which the following table, (from the records of the London Fever Hospital,) will show:

Under 10 years of age there died	14
From the age of 10 to 15	40
,, 15 to 20	118
,, 20 to 25	84
,, 25 to 30	73
,, 30 to 35	25
,, 35 to 40	39
,, 40 to 45	30
,, 45 to 50	29
,, 50 to 55	14
,, 55 to 60	12
,, 60 to 65	6
,, 65 to 70	9
,, 70 to 75	5
,, 75 to 80	2
	500

TREATMENT. Fever cannot be cured instantaneously: it may be moderated; it may be gradually subdued; from being violent and dangerous, it may be rendered mild and safe. The physician may be favored to bring it to this condition; and he can rarely accomplish more than this.

The common continued fevers of this country require very little treatment. There is no affection of any organ intense enough to need the application of a powerful remedy. The derangement of function is so slight that a spontaneous cure commonly takes place in the course of a few days. Confinement to bed—the abstraction of stimuli—low easily digested diet—gentle aperients, repeated according to circumstances, and washing the surface of the body with cold or lukewarm water, constitute the whole of the treatment required.

When fever surpasses this mild form it becomes a serious disease. If we examine a large number of bodies of persons who have died of fever, what is found? Inflammation, in general rising in degree, and increasing in extent, or both, in *proportion* to the intensity of the febrile affection. Consequently the great danger in fever is the supervention of inflammation; death being here almost always occasioned by the inflammation of some organ essential to life.

The chief object in practice, then, is clear—to prevent inflammation, or, if that cannot be done, to control or remove it. If we accomplish this, the fever will not be cured at once—it will go on for some time—but it will come sooner to a close, and proceed mildly to a safe termination. Fail to accomplish this, and the fever will go on from bad to worse; even to the destruction of some organ or organs by the process of inflammation.

The particular remedies of the greatest service in fever are pointed out under the respective titles, but it will be evident to all that blood-letting is a grand remedy in the early stages, at least in the country, in unbroken constitutions, and when there is nothing depressive in the character of the reigning epidemic. For pains in the head, chest, or abdomen, local bleeding should also be had recourse to. It is worthy of remark, that smaller bleedings will subdue fever than pure inflammation.

Observe: a moderate spontaneous looseness is frequently a salutary crisis of fever, and if it do not prove exhausting, should by no means be interfered with.

The following remarks of Sydenham, in reference to the great diversity in the causes and symptoms of fevers, the necessity of caution in the use of remedies, and the folly of adhering to exclusive systematic views, are admirably instructive:—

"This, however, I am convinced of, from numerous careful observations, that the same method which cures in the middle of the year, may possibly prove destructive at the conclusion of it; and when I had once happily fallen upon a genuine method of treating any species of fever suitably to its nature, I always proved successful, (proper regard being had to the constitution, age, and other particular circumstances of the patient,) till that species became extinct, and a new one arose, when I was again doubtful how to proceed, and notwithstanding the utmost caution, could scarce ever preserve my first patients from danger, till I had thoroughly investigated the nature of the distemper, and then I proceeded in a direct and safer way to the cure."

There is a fever, not uncommonly met with, sometimes called *bilious*, but now more frequently *gastric* fever, as originating in stomachic and intestinal irritation, and which it is necessary briefly to notice. This often begins in an unusual manner, and also follows an unusual course. Sometimes patients will be for weeks under the influence of this fever without knowing it, although they are very sensible they are not well. Its most remarkable *symptoms* are,—general uneasiness and restlessness, or, as the patient expresses it, a state of complete wretchedness,—a very unpleasant state of the mouth, with an extremely bad taste,—heat, tenderness, or pain in the pit of the stomach, and redness of the back part of the mouth.

This fever is sometimes epidemic; it was so in 1826-7. The *treatment* of this fever must be cautiously pursued, and mainly consists in giving mild aperients, as No. 121, page 125, or clysters,—with saline medicines, as No. 24, page 102,—moderating the heat of the surface by washing it with tepid or cold water,—by attention to a fluid, easily digested diet, and comforting the patient in every possible point of view.

OF FILMS, OR SPECKS ON THE EYE.

By films, or specks on the eye, is meant the opaque spots which are frequently seen on the anterior transparent convex part of that organ, and which are almost universally the consequence of active or slow inflammation. The opacity may be confined to a point, or may extend over the whole, or the greater part of the tunic, which is, in technical language, called *cornea*.

The ophthalmic ointment, No. 92, page 118, will remove these specks when recent. The ointment, No. 89, page 117, is likewise of great utility, and will remove both the specks and the slow inflammation on which they depend. If the films are of long standing, and obstinate, the following eye-water is recommended by Scarpa, the able and celebrated Italian surgeon.

Take of muriate of ammonia, two scruples; acetate of copper, four grains; lime-water, eight ounces.—Mix. The fluid is to be filtered, after standing twenty-four hours. To be used with an eye glass, twice or thrice a day.

After this has been employed for two or three weeks, it should be changed for a stimulating ointment, which may be applied in the same way as the above ointments.

Take of prepared tutty, one drachm; socotorine aloes, in powder, two grains; calomel, two grains; prepared hog's lard, half an ounce.—Mix.

This ointment is praised by the judicious Scarpa. When the eyes are very irritable, and cannot bear these applications, the oil of walnuts may be tried, or the ointment, No. 89, page 117, reduced in strength by adding to it an equal portion of hog's lard. Thirty drops of the solution of oxymuriate of mercury, (page 26)) taken morning and evening, is a powerful assistant to these remedies.

It is generally necessary to persevere with one or other of these applications for many weeks, and, in obstinate cases, it will frequently require many months to eradicate the opacity. The general health should be improved by every proper means. Occasionally some of the small vessels ramifying on the external surface of the eye, become turgid and prominent, and connect themselves with the films, when, if the foregoing remedies are not of themselves effectual in correcting this appearance, the assistance of an oculist will be necessary.

OF FLATULENCY.

Flatulency is, for the most part, a symptom of indigestion, colic, hysterics, hypochondriasis, and other complaints which originate in, or are connected with, a weakened state of the stomach and intestinal canal. When the energies of these organs are impaired, they lose the corrective power which they possess in a healthy condition over the materials they contain, and, as a consequence, a rapid fermentation takes place, and the digestive canal is distended and overloaded with the air disengaged; relief being only obtained by frequent rejection upwards or downwards. In a highly debilitated state of this canal, the quantity of gas separated in this manner is sometimes prodigious, and may amount to an eructation of many hogsheads in an hour; a circumstance not unfrequent where weakness of stomach and imprudence in diet are co-existent. Nor need we be surprised at this, since a single apple, during fermentation, will give out, according to the experiments of Dr. Hales, about six hundred times its bulk of common air; and many of the

vegetables introduced into the stomach possess as much or more ventosity than apples.

But flatulency occasionally exists without any other symptom of indigestion; occurring, for example, in healthy persons after the enjoyment of a full meal, in which case it is plainly at once the effect and indication of excess, by which the stomach is oppressed and enfeebled in its functions, and rendered incapable of exerting its full control over all the food it contains, part of which, therefore, ferments and extricates gas. And from this explanation, it will be easily understood how a frequent, unrestricted indulgence of the appetite, may convert a temporary weakness of the stomach, and an occasional flatulency, into a permanent disorder.

Generally speaking, the *immediate cause* is owing to a delicate or weakened condition of the stomach and bowels, which explains why infants are so subject to flatulency, from the natural delicacy of these organs in them. It will be seen, from what has been said above, that whatever tends to weaken the digestive organs, may act as an exciting cause; such as drinking a large quantity of cold fluid when the body is heated, a poor vegetable diet, violent purgatives, worms, and lingering chronic complaints. An immoderate indulgence of the appetite, as an exciting cause, has already been alluded to.

It is generally supposed, that air is occasionally separated from the mouths of the secreting vessels into the digestive organs; but, in the present instance, there can be little or no doubt, that it is merely given out by the materials introduced into the stomach in the form of food, and tending towards fermentation.

TREATMENT. The cure depends upon giving tone to the digestive canal, and improving the health, which will be most certainly accomplished by carefully regulating the bowels by means of diet, and gentle aperient pills, and by taking tonics and aromatics. The plan of cure laid down under the head of *Indigestion*, will probably be the best which the patient can resort to. Constant active exercise in the open air, with regular friction over the bowels, twice a day, is highly proper; and the following strengthening pills are worthy of particular attention.

Take of ipecacuanha and rhubarb, in powder, twenty grains; ginger, in powder, one drachm; aromatic confection, a sufficient quantity.—Mix. Divide the mass into forty pills, and let two be taken two or three times a day; with one of the aperient pills, No. 100, or 101, page 120, every second night, should the confined state of the bowels require it.

Dry biscuit is a useful article of diet in this complaint.

In those flatulencies which come on about the time the men-

strual discharge ceases, an occasional small bleeding, with a lax state of the bowels, often gives more relief than any other remedy, if we except the pill, No, 98, page 119.

As a palliative to give quick relief when the patient is greatly oppressed with wind, a tea-spoonful of ether, or of tincture of ginger, may be taken in a little brandy and water.

OF FLOODING.

It is only of the hæmorrhage or flooding after delivery that I intend to treat here. For a small discharge of blood to continue for some time after childbirth is a circumstance neither uncommon or alarming, but when it is excessive it is called a flooding, and then becomes dangerous, requiring a prompt and decisive treatment for its suppression.

It is sometimes produced by pulling too forcibly at the umbilical chord, and separating the after-birth from the walls of the womb before its blood-vessels have sufficiently contracted. It may also arise from clots of blood remaining in the womb, and preventing its due contraction; but the most common cause seems to be an exhausted state of the vessels themselves, and a consequent inability to contract their mouths, so that the blood flows through them without resistance,

Treatment. In the treatment of this affection, we must ever bear in mind the principle, *that contraction of the womb is the only remedy for hæmorrhage from that organ*, and, therefore, our efforts should be directed to secure this contraction as speedily as possible. One of the most effectual means to obtain this is, by friction and pressure of the surface of the abdomen over the seat of the womb. This part should be courageously but cautiously grasped, and well rubbed, until it is found to contract under the hand, when the bleeding will be arrested. See my *Treatise on the Diseases of Females*. Another of the most powerful means of checking flooding, is dashing cold water on the naked abdomen *from on high*. This, if I am not mistaken, was first pointed out by the late Dr. Gooch, a midwifery practitioner in London, who has remarked on its instantaneous effect in putting a stop to the bleeding, after the coldest water has been used in vain, in the common way of applying it to the parts by means of cloths. After dashing the cold water on the abdomen *from on high*, it will be proper to continue the application of cold, by means of wet cloths kept constantly applied to the parts, till all hæmorrhage has ceased; the windows should be at the same time thrown open, and the patient covered only with a sheet, and kept perfectly quiet.

Should this plan fail, or there is reason to suspect the retention

of clots of blood in the womb, the accoucheur's hand should be directly introduced, and the clots be withdrawn, when the bleeding will often immediately cease. It is probable, that the gentle stimulus or irritation conveyed to the womb, by the simple introduction of the hand into its cavity, has some effect in every instance where benefit has followed the practice, therefore, we may calculate upon a frequent advantage from this stimulus alone, even where there are no clots to bring away.

Should the rush of blood be so prodigious as to produce so great and sudden exhaustion as to threaten the immediate extinction of life, the warmest and most active cordials must be given. Madeira wine or brandy, in an undiluted state, should be administered; and if we succeed in rousing the patient, they should be dropped by degrees, or exchanged for food of a rich and nutritive, but less stimulant description. Opium also is, in this condition of the female, of the greatest value, especially in irritable delicate constitutions; and it must be given in the extremity of danger in large quantities, as one or two tea-spoonfuls of the tincture for a dose, to be frequently repeated. Opium restores the lost energy of the arterial system, and, in the nervous agitation which follows flooding, is sometimes capable of saving persons apparently in the jaws of death.

For the giddiness, noise in the ears, and pains in the head, which are apt to follow great loss of blood in lying-in women, the best remedies are a saline aperient (No. 27, page 103) every other morning, with about fifteen or twenty drops of tincture of opium, once or twice a day.

OF GALL-STONES.

Gall-stones, or *Biliary Calculi*, are concretions formed in the passages through which the bile passes from the liver into the gall-bladder, or into the first intestine.

They occasion, in many instances, some disturbance, with paroxysms of pain, commonly referred to the pit of the stomach, and right side, darting through to the back, and sometimes give rise, whilst passing into the bowels, to sickness or vomiting, to jaundice, or to severe attacks of colic. In their passing along the *ducts*, the pain is often very acute, and attended with nausea, flatulence, a bitter taste in the mouth, acid or bitter eructations, colic, distension of the belly, and perhaps vomiting, and either complete jaundice, or a slight yellow tint over the eyes or lips. *The pulse is usually unaffected, and there is no fever*, unless the symptoms are particularly violent, or of long duration. In the severest examples, there is commonly present, a furred, dark-yellowish tongue, great restlessness, anxiety, loss of flesh

and strength, and considerable tenderness at the pit of the stomach. The bowels are mostly confined, and the motions devoid of bile. The attacks vary much in regard to their duration and recurrence.

Persons rarely, if ever, pass gall-stones, who have not been previously suffering for months or years from indigestion and bilious affection. It is a previous state of deranged digestion, and affection of the liver, which originates the formation and passage of these concretions; and, consequently, whatever occasions weakness and disorder of the digestive organs, preventing the perfect assimilation of the food, (see *Indigestion*) may be *causes* of this disease. They occur most frequently in the female sex, probably from their more sedentary habits, and in the decline of life, and are commonly met with in fat persons.

Treatment. During the paroxysm of pain, &c. endured while the concretions are passing, our object should be entirely to empty the bowels by the use of purgative clysters, as No. 8, page 97, and the use of two of the purgative pills, No. 97, followed by a draught, No. 27, or 28, page 103, or by an ounce of castor oil, rubbed together in a mortar with the yolk of an egg, and a little water; to which may be added warm fomentations, bladders of hot water being applied over the pit of the stomach, or friction, with the liniment, No. 39.

When the bowels are freely evacuated, relief in general speedily follows, but if the continued pain or uneasiness demands an anodyne, a pill containing half a grain of the muriate of morphia may be taken directly, and repeated in half an hour, and that once, twice, or thrice, should the severity of the pain require it; or fifty drops of laudanum may be taken in water. Almost incredible quantities of opium have been taken, in a very short period, in this disease. See page 65.

If considerable swelling and tenderness exist at the pit of the stomach, especially if the pulse should be full and hard, we may suspect inflammation of the gall-bladder and ducts, and twelve leeches should be applied over the swelling; or, in case the patient is of a full habit, twelve or sixteen ounces of blood may be drawn from the arm.

In the intervals of the attacks, our object should be to improve the secretions from the liver and stomach, to promote their regular discharge, and to invigorate those organs; and in order to accomplish these objects, the patient should be very attentive to his diet, (see *Indigestion*), and to walking exercise, or riding on horseback daily and freely, while he regulates his bowels by the pill, No. 100, or 101, page 121, and takes a tea-cupful of the decoction of dandelion, twice a day—or a tea-spoonful of the *alkaline solution*, or the *alkaline tincture of rhubarb*, (page 2,)

twice or thrice a day. The pill, No. 99, page 120, taken at the same time every night, is a valuable remedy. Daily friction over the pit of the stomach should not be omitted, and a course of the Cheltenham or Leamington waters, is likely to prove very serviceable.

The following prescription may be tried, should the preceding medicines not have a satisfactory effect. It is called the remedy of Durande, and is much recommended on the continent. It is no doubt, a useful remedy,* especially with the addition of tincture of henbane, but is not equal, in my opinion, to the remedies above named.

> Take of the compound spirit of sulphuric ether, six drachms; rectified spirit of turpentine, four drachms.—Mix them together, and, as I advise, add of tincture of henbane, three drachms. The dose is a tea-spoonful in water, twice or thrice daily.

Fatty substances should be carefully avoided in diet, and country air, with very active exercise, is of the first importance.

OF DISORDER OF THE GENERAL HEALTH.

This, as its name implies, is a state of disorder, in which the constitution generally seems more or less affected. In such cases, the digestive organs are necessarily deranged in their functions, and some of the symptoms of indigestion are consequently present; and a skilful physician who knows how to adapt his treatment to the varying exigencies of particular cases, would seldom be far from right in referring the malady to the effects of indigestion, and treating it accordingly. There is, however, a difference between this complaint and indigestion, properly so called, and one of the chief differences lies in the strong tendency in the former to the production of some local disease, as eruptions on the skin, ulcers, swellings, and thickenings of various kinds, &c. Besides, indigestion is primarily an affection of the stomach, which is not the case with this general derangement, for it may originate in the brain, or other parts, and many organs may early be implicated. White swelling, and other diseases of the joints, for example, often originate in derangement of the general health. In the commencement of this disorder, we frequently find the appetite and sleep much as usual, the bowels not sensibly deranged, nor the strength

* "I have prescribed the remedy of Durande in somewhat larger doses, and combined with it tincture of henbane, and certainly with marked benefit." *Dr. Copland's Dictionary of Medicine, p.* 396

much impaired, and the patient may look pretty well; but on a close examination, we commonly find the tongue furred, and clearly see that the secretions generally are unnatural, and that the patient is out of health. The *symptoms*, *causes*, and *treatment* of this affection are clearly pointed out under *Chronic Disease in General*. We may truly say, that every chronic complaint shows disorder of the general health, at least if it is severe, or long continued.

OF GOUT.

Great difference of opinion has prevailed respecting the *nature*, *causes*, and *treatment of gout*, but it is now generally admitted to be, in whatever way it shews itself, a disease of the constitution; and, when appearing in a regular form, it must be looked upon as a salutary re-action and evacuation of the system, whereby the equilibrium of the circulation, and a comparatively healthy state of the various functions are, for a time at least, restored. This is the view taken of it by very many, if not the majority, of the ablest physicians.

It is correctly divided into three varieties, viz. *acute*, *chronic*, and *retrocedent* gout.

The gout sometimes comes on very suddenly, particularly in its first attacks. In general, however, the inflammation of the joint is preceded by *various symptoms* indicating a want of vigour in different parts of the body. The patient is incapable of his usual exertions, either of mind or body; becomes languid, listless, and subject to slight feverish attacks, especially in the evening; he complains of pains in the head, coldness of the feet and hands, impaired appetite, flatulency, heart-burn, spasms of the stomach, and the usual symptoms of indigestion. He is oppressed with heaviness after meals, and a disturbed unrefreshing sleep ensues. The bowels are seldom regular, being either constipated, or too much relaxed; the mind, at this period, being generally irritable, anxious, and alarmed at the least appearance of danger. A deficiency of perspiration in the feet also, with a distended state of their veins, cramps, and numbness of the feet and legs, and other strange sensations, often presage the approaching fit. The duration of these symptoms previous to the fit, is various; sometimes only a day or two, at other times, many weeks.

The fit sometimes makes its attack in the evening, more commonly, about two or three o'clock in the morning. The patient goes to bed free from pain, and is awakened about this time by a very acute pain, generally in the first joint of the great toe, the pain often resembling that of a dislocated bone, with a

sensation as if hot water were poured on the part. It sometimes extends itself over all the bones of the toes, and fore part of the foot, resembling the pain occasioned by the tension or laceration of a membrane. Cold shivering is felt at the commencement of the pain, which is succeeded by heat and other symptoms of fever. The pain and fever increase, with much restlessness, till about the middle of the succeeding night; after which they gradually abate, and in the most favorable cases, there is little either of pain or fever for twenty-four hours after their first appearance. The patient, as soon as he obtains some relief from pain, generally falls asleep, a gentle sweat comes on, and the part which the pain occupied, becomes red and swelled. In most cases, however, the fit is not over, for the pain and fever return on the succeeding night with less violence, and continue to do so for several nights, becoming less severe till they cease.

Such is a simple fit of *acute* gout. But it often happens, that after the pain has abated in one foot, it attacks the other, where it runs the same course; and in those who have laboured under repeated attacks of the disease, the foot first attacked is often seized a second time, as the pain in the other subsides, which is again attacked in its turn, and they are thus alternately affected for a considerable length of time. In other cases, it seizes on both feet at the same time. After frequent returns, it begins to seize upon the joints of the hand, and at length the larger joints. When the gouty tendency is very great, almost every joint of the body suffers; the pain, when it leaves one, immediately fixing in another.

In strong people, the whole fit is generally finished in about fourteen days. In the aged, and those who have been long subject to the gout, it generally lasts about two months; and in those who are much debilitated, either by age, or the long continuance of the disease, till the summer heats set in. In the first attacks, the joints soon recover their strength, and suppleness; but after the disease has recurred frequently, and the fits are long protracted, they remain weak and stiff, and at length lose all motion.

The above are the *symptoms* of *acute* or *regular* gout.

Chronic gout, (which is by some physicians called *irregular* gout,) is the disease of a weakly or debilitated constitution. Here the inflammation and pain are more slight, irregular, and wandering than in the acute; there is only faint redness of the affected joint, or no change at all of the natural appearance of the surface; much permanent distention of parts, or continued swelling, with impaired moving power; and no critical indications of the disease terminating. The symptoms are always

associated with a disordered state of the digestive organs, a languid or oppressed circulation, and much nervous irritation in the system. The patient is distressed with various uneasy sensations in the stomach, as flatulent distention, craving or deficient appetite, heart-burn, &c.; the bowels are either costive, or too much relaxed; fluttering sensations are often felt about the heart; the painful sensations felt in the affected part are rather those of heat and coldness alternately, than of the more continued *burnings* which take place in the acute form of the disease; the spirits are depressed, and the mind very irritable.

The subjects of chronic gout are generally such as have for a considerable time laboured under regular attacks of the acute form of this disease: this, however, is not universally the case, for in some weakly or enfeebled constitutions, the gout soon begins to assume the chronic form.

Retrocedent gout is that form of the disease in which the gouty action is suddenly transferred from the joint, or other external part affected, to some internal organ, as the stomach, intestines, head, &c.

Whatever tends to produce an unhealthy fulness of the blood-vessels, hurts the digestive organs, and impairs the vigour of the system, may be ranked among the *causes* of gout. Perhaps the *principal causes* are an indolent and luxurious life, or a sedentary and studious one; hereditary predisposition; anxiety or vexation of mind; excessive evacuations of any kind; cold, flatulent diet, or immoderate indulgence in acid liquors; the suppression of any accustomed discharge; sudden exposure to cold when the body is heated; wet applied to the feet; costiveness; a variable climate. These may act both as predisposing and exciting causes.

It seems indisputable, that the more violent the fit, and the longer its continuance, the more the gouty disposition is confirmed, and the oftener the attack is renewed.

A continued imprudence, or excess in diet, disposes the gout to become chronic, and at last retrocedent, and to attack the stomach in the enervated, and the head in the corpulent.

One of the most frequent and powerful causes of the chronic gout in the present day, is the improper use of Wilson's tincture, Reynolds's specific, and other preparations of meadow-saffron.

This disease is *distinguished* from rheumatism by the previous symptoms of indigestion above noticed, which do not occur in rheumatism; by the pains attacking particularly the smaller joints, while rheumatism occupies the larger;—by the deeper redness and greater swelling of the parts affected in the gout than in rheumatism; and by the age of the patient, his habit of body, and mode of living.

TREATMENT. The treatment of *acute* gout naturally resolves itself into that proper while the fit is on, and that required during the intervals.

I have first to speak of the treatment proper during a fit of the gout; but before that subject is entered upon, it is right for me to observe, that when a patient is warned of the probable approach of a gouty paroxysm, by the occurrence of drowsiness, heart-burn, flatulence, costiveness, pricking and numbness in the lower extremities, coldness of the legs and feet, general chilliness, and other premonitory symptoms, which the subjects of the disease are well acquainted with, it will be invariably advisable to attend to these signs, and to administer suitable medicines without delay, since by proper management the threatened attack may frequently be averted; and if this object cannot be accomplished, the paroxysm will be thereby rendered milder, and probably shorter. One of the best plans for a person to adopt who is threatened with an attack of gout, is to take the following pill at night, and the draught No. 27 or 28, page 103, early on the following morning:

Take of calomel, a grain; James's powder, or antimonial powder, a grain; compound extract of colocynth, three grains; simple syrup, sufficient to form the whole into a pill.

This pill may afterwards be repeated every night, or every other night, (without the morning draught,) if the patient finds himself relieved by it; and he should take also a bitter stomachic, united with some alkali, (as the infusion of gentian, with liquor potassæ, or carbonate of soda, as below,) twice or thrice through the day, not forgetting to keep the bowels in a lax state, and to join with the use of medicine great moderation in diet, repose of mind, and early hours. When the patient is of a full habit, it will in general be necessary for him to observe a rigid course of abstinence for a few days. If the tongue be much furred, and attended with heart-burn, and nausea, an emetic of fifteen grains of ipecacuanha powder will also be proper, and often afford very sensible relief.

Take of compound infusion of gentian, an ounce and a half; tincture of columba, a drachm; carbonate of soda, fifteen grains.—Mix for a draught to be repeated twice or thrice daily.

During the fit, the most rational and efficacious treatment is that which clears the stomach and bowels, and aims at the restoration of healthy secretions from all the digestive organs; and the most effectual way of accomplishing these purposes, is by the administration of purgatives and diuretics, combined with mild mercurial alteratives, and a spare diluting diet.

Formerly, physicians were fearful of prescribing any active

medicine during a fit of the gout, and were generally disposed to trust almost entirely to patience and flannel to overcome the tortures of this distressing malady; but now professional men are fully agreed as to the propriety and necessity of endeavouring, by an immediate recourse to the foregoing means, to correct the disorder of the digestive functions, on which gout, in all cases, depends. As soon, therefore, as a patient is attacked with a gouty fit, he should take the pill of calomel, antimonial powder, and extract of colocynth, advised above, washing it down with a purgative draught, combined with a suitable diuretic medicine, as in either of the following forms. In the beginning, this pill must be repeated every night, or every second night, according to the severity of the symptoms, and the state of the secretions, as evinced by the appearance of the motions and urine. It may be observed, as a general rule, that this pill ought to be thus repeated so long as the stools are particularly offensive, or discoloured, and the urine deposits a sediment.

Take of calcined magnesia, fifteen grains; Epsom salt, a drachm and a half; vinegar of meadow-saffron, a drachm; spearmint water, an ounce and a half; syrup of orange peel, a drachm.—Mix them together for a draught.

Take of Epsom salt, Glauber's salt, of each, half a drachm, or a drachm; vinegar of meadow-saffron, a drachm; spearmint water, an ounce and a half; tincture of senna, two drachms.—Mix for a draught.

The first draught is undoubtedly the best in most cases of the present disease; but whichsoever is selected by the patient, it must be repeated every four or six hours, according to the urgency of the symptoms, and the extent of its operation on the bowels; since the principal objects to be accomplished by its use are, to clear thoroughly the alimentary canal, and to relieve the painful symptoms present, and these indications are, in every instance, most certainly fulfilled by maintaining a free discharge from the intestines, throughout the whole course of the fit. After this medicine has operated copiously three or four times, a sufficient action may in general be kept up by administering it once or twice in the twenty-four hours, which repetition will be necessary until all inflammation is removed, the stools and urine acquire a healthy appearance, and the tongue is nearly free from fur. Should it be preferred, either of these draughts may be taken in the act of effervescence; if so, twenty-five grains of carbonate of potash should be added to the draught, and when it is taken, a table-spoonful of lemon juice. This addition will make it more agreeable to many persons, and when much fever is present, is to be preferred.

After the above pill and draught have been so taken as to act

freely on the bowels, some preparation of opium will in general be proper and necessary, if severe pain continue. If solid opium be used, it should be invariably united with James's powder, which increases the efficacy of the opiate, while it counteracts its deleterious effects. Ten grains of crude Turkey opium, and eight grains of James's powder, may be made into ten pills, and the patient take one or two, at bed-time, as the first dose, and repeat one every hour or two afterwards, until sufficient relief is obtained. If opium in a liquid form be preferred, Battley's solution of opium will be found a very valuable medicine, and may be taken in doses of thirty or forty drops in soda water, or lemonade, every hour or two, as recommended in the use of solid opium. Many gouty subjects will find this solution to be a remedy of superior value. No preparation of opium, however, must ever be used in gout, until after the administration and operation of active purgatives.

Some physicians have advised blood to be drawn from the arm during a severe fit of the gout, believing it to be very serviceable in cases attended with acute inflammation, occurring in full habits; but the majority of the ablest professional men, of the present day, disapprove of the measure, and it is, in my opinion, highly improper and injurious under ordinary circumstances.

Nor can I recommend any patient to resort to the use of leeches as a mean of lessening the pain and inflammation in the part more especially affected. They are, I am aware, a common resource for the relief of these symptoms, but the effects of their application are very seldom satisfactory, and often injurious; since, in numerous instances, even where they seem most applicable, they fail to afford that alleviation which is anticipated, and have very generally a strong tendency to aggravate the subsequent debility of the parts, particularly when freely applied.

One of the most efficacious and best local means of relief, consists in the use of a warm evaporating lotion, as that advised by Sir Astley Cooper in common inflammation, consisting of two ounces of spirit of wine mixed with eight ounces of water; or that strongly recommended by Sir C. Scudamore, which is made by mixing together four ounces of spirit of wine, and eight ounces of camphor mixture. After having rendered the lotion selected agreeably lukewarm, by immersing a thin cup containing it, in a basin of very hot water, it is to be applied to the affected part by means of rags of fine linen, which are to be renewed as often as they become dry. It would be improper to use either of these lotions hot or cold, because, when hot, they are found too stimulating, and when cold, there is a risk of check-

ing the gouty action too suddenly. During the night, when the lotion cannot be used, the part may be covered with a piece of oil silk, just the size of the linen rags.

Poultices to the inflamed part were formerly much resorted to, and are still, perhaps, too commonly employed. When used hot, they are liable to the same objection as hot lotions—that of being stimulant, and leading to subsequent relaxation and debility; and when applied cold, they in general suddenly check the local action, and are, therefore, often followed by alarming symptoms. But a poultice made by wetting a sufficient quantity of fine bread crumb, with one of the above lotions hot, and applying it to the inflamed joint when it has become just comfortably lukewarm, is often of considerable service in relieving the pain and inflammation, and sometimes agrees remarkably well. This poultice may be repeated twice in the twenty-four hours.

Under symptoms of very severe suffering, it may frequently be advisable to apply some anodyne directly to the part affected, in addition to the internal use of opium, and the extract of belladonna appears to be a very appropriate and efficacious application for this purpose. A drachm of this extract may be mixed with an ounce of spermaceti ointment, and a sufficient quantity of this mixture to cover the affected part, spread on lint, and applied over the seat of pain. In urgent cases, it may be repeated twice or thrice in the twenty-four hours, if necessary, and sometimes its tranquilizing effects will be augmented by covering it with the bread poultice, made with spirit of wine and camphor mixture, as just described.

I am nearly as much averse to the use of warm fomentations in this disease, as to warm poultices, and for the same reasons. They do not appear to me to be by any means well adapted to alleviate the pain, or remove the inflammation of gout, and their ultimate effects are those of weakness and relaxation. Hot bathing of the feet is, for the most part, highly objectionable, during the fit. Neither should the inflamed joint be kept very warm by the use of flannel or other means, since this practice invariably aggravates the severity, and prolongs the duration of the paroxysm. The proper practice is, to keep the affected part in such a moderately cool state as is comfortable to the patient's feelings, without being so great as to check the insensible perspiration. By this means we repress inflammation, allay pain, and do not increase the subsequent debility of the joint.

Sydenham long ago pronounced a fluid, diluting diet, the proper one in a fit of the gout, and such a diet is still recommended by the best informed of the profession. Under very acute symptoms, the nourishment must be wholly fluid, unstimulating, and rather small in quantity, until the severity of the

inflammation, &c. has been subdued, and the patient is beginning to recover. The best food for the patient in this stage, is bread and milk, light bread puddings, mutton or veal broth, gruel, barley-water, and rennet-whey. Roasted apples, grapes, and oranges, are likewise generally admissible; and when the patient begins to recover, an egg may be added to the above, with half a glass or a glass of white wine, diluted with water, and sometimes a little bit of chicken or roast mutton for dinner. It should be particularly noticed, that even a small excess or impropriety in diet, during a gouty paroxysm, always materially aggravates and prolongs the attendant sufferings, and sometimes gives rise to severe erysipelas, either in conjunction with the disease, or as an immediate sequel to it.

It may be safely assumed as a general rule, which is rarely liable to exceptions, that when the patient is strong and full of blood, and the inflammatory symptoms run high, a spare diet, wholly fluid, is highly necessary. When, on the other hand, he has lived freely; when he has long been subject to attacks of gout; especially when these have shewn a tendency to become irregular; when the system has fallen into a state of debility, and the inflammatory symptoms do not run high, the diet ought not to be so low, although great caution is still necessary in taking care to increase a little its nourishing qualities without rendering it stimulating. Therefore, in the case of a debilitated stomach, with weak constitutional powers, accompanied with languor and depression, a glass or two of Sherry or Madeira wine, diluted with water, and a very small quantity of animal food, daily, may be added to the articles above specified. In such instances, it will often be an advantage to mix the wine allowed with a little sago, gruel, or panada, instead of giving it pure, or diluted with water.

Ripe oranges and grapes are usually admissible during the fit, but acidulated drinks do not generally agree at that period, and acid matter must be always avoided, in every shape, during the operation of the calomel purgative pill.

In a severe fit of the gout, and during the height of it, the patient is of necessity confined to his bed in a helpless state, and then the affected limb must be carefully placed on small pillows, in the most easy position; but except under such extreme circumstances, the patient ought not to indulge in bed beyond what is unavoidable. When able, he should every morning leave the bed for the couch or the chair, having his legs raised and supported in the most easy position; and, in proportion as pain and inflammation abate, should gradually employ such further exertion as relieves rather than produces irritation. Subsequent stiffness and debility of the limbs are invariably

to be counteracted, in a great degree, by moderate and early efforts of exercise, carefully attempted.

When the patient is convalescent, he must, notwithstanding, continue the use of the proper alterative and aperient medicine for some time, indeed, until all the secretions assume healthy characters; and these remedies should be accompanied with a mild, moderate, and suitable diet and regimen. For, at this period, the chief indications of treatment are, the restoration of the digestive functions to a healthy state, and the weakened limbs to a due degree of strength, and the means just alluded to are, undoubtedly, the most appropriate and efficient for the accomplishment of these purposes, with which vegetable bitters and mineral tonics may sometimes be advantageously united. Therefore, in a state of convalescence from a fit of the gout, the patient may take one of Plummer's pills, No. 117, page 124, or one of the pills, No. 98, or 99, every second or third night, with half a pint of compound decoction of sarsaparilla, in divided doses, through the day, or three or four five-grain pills of the compound extract of sarsaparilla; the bowels being carefully regulated by the occasional use of a mild aperient pill, as No. 100, or 101, page 120. Sometimes the pill composed of calomel, James's powder, and extract of colocynth, mentioned at page 417, will answer still better as an aperient; it is certainly a useful form, and will be of much service to many gouty individuals. The proper object, at this period, in the employment of opening medicine, is gently to clear the bowels, and excite healthy secretions from them, without inducing a direct purgative effect.

It is a common practice, in the state of convalescence, to recommend a stomachic and strengthening medicine to be taken during the day, and either a vegetable bitter, or some preparation of steel, is usually selected by medical men. It will generally be best to commence with a bitter infusion combined with an alkali, and from that to proceed to the use of some preparation of steel. If, therefore, the sarsaparilla, above referred to, be not taken, the mixture, No. 83, page 116, may be resorted to, or the following, which sometimes agrees remarkably well.

Take of compound decoction of aloes, two ounces; compound infusion of gentian, three ounces; camphor mixture, an ounce; compound spirit of ammonia, two drachms.—Mix, and take three table-spoonfuls twice or thrice a day.

Sometimes the *alkaline solution* alone (page 2) proves a valuable tonic to patients recovering from a fit of the gout. A tea-spoonful may be taken, thrice a day, in barley-water, or milk and water. As a mineral tonic, the tincture of muriated

iron, or the tincture of ammoniated iron, are eligible forms. Twenty drops of the former, or thirty of the latter may be taken twice or thrice daily, in an ounce and a half of infusion of columba, or cascarilla. The pills, No. 102, page 121, are also very proper.

The diet, during the state of convalescence, should consist of a moderate quantity of the most digestible animal food, once a day, with eggs, bread, a glass or two of white wine, a little mild beer, &c.; and change of air and scene, with suitable exercise, will always be very serviceable.

The limbs, and especially the affected parts, should now be regularly sponged with lukewarm salt and water every morning; and after the skin has been wiped quite dry, they should be well rubbed with the hand, or flesh brush, till a comfortable glow in the parts is produced. This practice, if persevered in, will generally be very effectual in removing debility and stiffness of the joints. Should any particular feebleness exist, in addition to the morning sponging, a stimulating liniment, as No. 40, page 105, or the following, may be freely rubbed over the joints, twice a day.

Take of compound camphor liniment, and compound soap liniment, of each, an ounce and a half; tincture of Spanish fly, three or four drachms.—Mix for a liniment.

If the lower limbs are affected with swelling, the use of a calico or flannel roller will be found useful.

During the intervals, we have it in view to prolong them, and to render the succeeding fit mild and regular, or entirely to prevent its return; and the most powerful means of accomplishing these desirable objects, are by the strict observance of a suitable and moderate diet, active exercise in a salubrious air, and early rising, united with a proper use of aperient, alterative, and stomachic medicine.*

A PROPER DIET AND REGIMEN HAVE LONG BEEN REGARDED AS AMONG THE MOST ESSENTIAL PARTS OF THE TREATMENT OF GOUT, as well in the intervals as during the fit; indeed, they are of such pre-eminent utility, that they will alone often display a remarkable power in bettering the condition of the patient, and sometimes even nearly approach to a curative effect,

* "Amongst the remarks, (says the illustrious Sydenham,) I proceed to communicate, on the cure of *Gout*, this is primarily and chiefly to be attended to, namely, that all *stomachic* or *digestive* remedies, whether they consist of a course of medicines, regimen, or exercise, are not to be entered upon in a heedless manner, but to be persisted in daily with great exactness. For since the cause in this and most other chronic distempers, is become habitual, and in a manner changed into a second nature, it cannot reasonably be imagined, that the cure can be accomplished by means of some slight and momentary change made in the blood and juices by any kind of medicine, or regimen, but the whole constitution is to be altered, and the body to be in a manner formed anew." *Sydenham's Works, by Swan, p.* 486.

yea, to an effect perfectly curative, while without them, no other means will be attended with any great or lasting benefit. If the patient be of a full habit, especially if young, and not long afflicted with the disease, his diet should constantly be very mild, and rather small in quantity, consisting chiefly of vegetable food; but if he has been long harrassed by the disease, and is deficient in strength, his diet, although mild, and moderate in quantity, ought to be nourishing, and should, therefore, consist of a suitable proportion of animal and vegetable food, to which may be added a glass or two of Sherry or Madeira wine daily, with a little home-brewed malt liquor. Ardent spirits are altogether inadmissible in every case, and the strong and plethoric should avoid wine.* Ale and all the stronger malt liquors must also be forsaken. The information given on this subject under *Diet* and *Indigestion* will assist the gouty in the selection of those articles of food which are the best for them; and they should never forget, that moderation in quantity must be invariably the order of the day. The gouty patient must retire and rise early; change, if possible, the air of the crowded city for that of a healthy spot in the country; and use daily active exercise, proportioned to his strength.

In the intervals, the condition of the stomach and bowels should claim constant and especial attention, as it is highly necessary that they should be preserved free from any accumulation, or irregularity in their action. A principal point is, to keep the bowels clear, and if this cannot be done without medicine, a little of the aperient mixture, No. 74, page 114, taken occasionally in the morning, or one or two of the pills, No. 100, or 101, page 120, at night, will be found useful. If, at any time, the secretions are unhealthy, the means pointed out in the commencement of this article, as proper to be resorted to when the patient is threatened with a fit, should be used, and persevered in till they become healthy. If ever any stomachic medicine is wanted, I would recommend the alkaline solution, (page 2,) or the mixture of decoction of aloes, infusion of gentian, and camphor mixture, as prescribed in page 422. The compound decoction of sarsaparilla is also a good medicine here in numerous instances.

The above observations I believe to present the reader with a correct view of the proper treatment of *acute* gout, and it now

* I think there are very few cases, even among those where debility is present, in which a total abstinence from wine will not be advisable and useful. Sir Wm. Temple's remark well expresses my opinion.—"I have known so great cures, and so many, done by obstinate resolutions of drinking no wine at all, that I put more weight upon the part of temperance, than any other." And I very much approve of Dr Thornton's sentiments, "It would be happy for mankind, if wine were prohibited, and only good, perfect beer used in its place."

remains for me to speak of that which is applicable to *chronic* gout; but before I proceed to this subject, it will be proper for me to notice a few of those medicines which are at this time so highly extolled by some persons as valuable remedies in this disease, particularly *meadow-saffron*, *eau medicinale*, *Wilson's tincture*, and *Reynolds's specific*.

There is no doubt that *meadow-saffron* possesses specific powers in relieving the pain of this disease, and that, under judicious management, it becomes a remedy of considerable value; but if used frequently, and in large doses, as a principal means of removing the malady, it can never fail of ultimately proving highly injurious. Its good and bad effects may be stated in a few words. When it is used in small doses, occasionally repeated, in conjunction with suitable purgatives and alteratives, it frequently materially assists the full and efficient operation of those medicines, and is certainly of great service in relieving the pain of the disease, without being followed by any subsequent injury; but if, on the other hand, it be employed in considerable doses, freely repeated, as a chief means of cure, the practice is as destructive in effect as it is bad in principle, for although in first using it the patient finds its operation to be most pleasing and soothing, yet, in this way of employing it, it soon grows less and less effectual in relieving the fits, while, from its injurious influence on the stomach and nerves, it engenders so great a degree of debility in them, as leads to a more speedy return of subsequent paroxysms, which also become of a more severe and intractable character—and thus the unhappy victim of an apparently valuable but delusive remedy, finds, often when too late, that he has been trusting to that which, in giving him present relief, has robbed him of future comfort, by entailing on him excessive and permanent debility of the stomach, nerves, and general system, and by inducing a state of chronic gout from which he is scarcely ever free. This is a true statement of the ordinary and invariable consequences of an injudicious use of meadow-saffron; and I, therefore, earnestly recommend the gouty patient never to employ that article, except under the directions of a judicious medical practitioner, and as an auxiliary to purgative medicine.

Eau medicinale, *Wilson's tincture*, and *Reynolds's specific* are, undoubtedly, preparations of meadow-saffron, and the two last purely so; and what I have just said respecting the effects of an improper use of the latter, is strictly applicable to that of all those *nostrums;* indeed it applies to them with still greater force, since they are all very strong preparations of meadow-saffron, and, therefore, more objectionable than either the vinegar or wine of this substance, which are the forms most ap-

proved of by physicians. The man who uses either of these "*specifics*" freely will repent it, perhaps as long as he lives.

The Bath waters are by no means so useful to gouty persons as many individuals suppose. They are not beneficial in the fit, nor during the intervals, when any inflammatory disposition exists; and when gout is, as it is expressed, flying about a patient's constitution, they are highly dangerous. This is the opinion of the late Dr. Parry, an eminent physician at Bath, and also of Sir George Gibbs, who now resides there. These waters are, however, sometimes very serviceable in removing the indigestion, and general debility, left after a fit of this disease; but the Cheltenham or Leamington waters are a still better, and a more certain remedy.

The principal indications of treatment in *chronic* gout, are to lessen irritation in the stomach and intestines, and restore their healthy secretions; to strengthen them and the constitution at large, and to apply mild applications of a soothing, cooling quality, to the affected joints.

It is clear, that the best means of obviating irritation in the digestive organs, and of imparting increased strength to them, and the system generally, is by perseverence in the proper use of aperient, alterative, and strengthening medicine, combined with a mild, moderate, and nutritious diet, a correct regimen, and daily exercise in an open, salubrious air: with which the occasional use of anodyne medicine must be united. The due regulation of the bowels is of the first consequence; but from the local as well as general debility present, purgatives must be avoided. If the bowels can be regulated by diet and exercise so much the better, but if not, mild aperients, chiefly of a warm, aromatic quality, should be resorted to, once, twice, or thrice a week, or as occasion requires. For occasional use, the mixture, No. 74, page 114, will be proper, and sometimes prove particularly beneficial; but for ordinary use, a warm laxative pill, as No. 100, or 101, page 121, is preferable. Generally speaking, calomel should not make any part of the aperient administered, unless the secretions are in a very vitiated condition, as evidenced by the unhealthy appearance of the stools, urine, and tongue, when small doses of calomel, given every second or third night, either with the aperient ingredient, as in No. 97, or separately, as in No. 98, or 99, will be of great service. The Seidlitz powders are often a useful aperient for the gouty. It must be particularly noticed, that the proper object in the employment of aperients in this form of gout is to keep the bowels clear without irritating them, or weakening the general system; and that, in resorting to mercurial alteratives, care should be exercised not to allow it sensibly to affect

the constitution by its specific operation, as whenever it affects the mouth, or renders the pulse quick and hard, its injurious effects are certain. The alterative pill, No. 98, or 99, page 120, taken twice or thrice a week regularly, is frequently very beneficial, and sometimes six ounces of the compound decoction of sarsaparilla, or a little of the compound extract, may be advantageously taken, twice a day, at the same time.

As tonics, the alkaline solution (page 2), with infusion of cascarilla, gentian, and columba, and preparations of steel, merit the most confidence. Alkalies have always been favorite medicines with physicians in the treatment of chronic gout, and I think the alkaline solution now referred to is a very suitable tonic in most cases, and in many instances it will be found of superior advantage. In the beginning, the patient should take only half a tea-spoonful, twice or thrice a day, in water, or infusion of cascarilla, and gradually increase it to a tea-spoonful and a half, or two tea-spoonfuls, at a dose. In its continuance, it almost always favors the natural action of the bowels,—a circumstance of no small moment to the gouty. The tonic draught, No. 35, page 104, or the mixture of compound decoction of aloes, &c. given at page 422, or the pill, No. 102, or 103, will sometimes agree very well.

In most cases, the warm bath is a useful auxiliary, and sometimes the Bath or Buxton waters. The purging waters of Cheltenham, Leamington, or Harrowgate, are frequently of the highest value, and where they agree, will frequently have a greater effect in giving tone to the stomach and strength to the whole frame, than any kind of tonic.

The local treatment of chronic gout is similar to that recommended for the acute form, at page 419. The lotion of spirit of wine and camphor mixture, prescribed at page 419, should be applied whenever there is any tenderness or inflammation in the parts affected, or if there be much pain, the belladonna ointment. These will be of far more service than leeches, blisters, or fomentations, which are, indeed, neither appropriate, nor always safe applications. Leeching is rarely of service in chronic gout, but very often hurtful, by increasing the debility already present, and strengthening the tendency of the disease to become still more irregular, and at last retrocedent. When the inflammatory symptoms of the joints have been removed by the above lotion, the system of sponging the joints and lower extremities with luke-warm salt water in the morning, and active friction afterwards, twice in the day, with a stimulating liniment, as No. 39, or 45, will be found highly useful.

The Bath and Buxton waters are a valuable local as well as general remedy in chronic gout. I am inclined to think very

highly of the efficacy of the Buxton water, particularly in aggravated cases.

To relieve the pains of the chronic form of the present disease, the milder kinds of anodynes should be given, such as Dover's powder, in small doses, in conjunction with the saline effervescing draught, or with the draught, No. 24, page 102, —the extract of garden lettuce, Battley's sedative liquor of opium, or the muriate of morphia. Four grains of Dover's powder may be taken at bed-time, or three grains twice or thrice a day, in conjunction with the saline draught, which augments its good effects. Or five grains of the extract of garden lettuce may be taken, when the pain calls for it. A quarter of a grain of the muriate of morphia is likewise a valuable anodyne in these cases.

But the patient ought not to place too great a dependence on medicine, since a proper diet and regimen, sufficient active exercise, and change of air and scene, will sometimes be of more service than all the drugs of the apothecary, and are invariably of considerable use. The diet should consist of mild nourishing food, of a moderate quantity, and chiefly solid food, with a small quantity of Sherry or Madeira wine daily; his hours of rising, and retiring to rest, should be early, and habitually observed; all anxiety of mind, and severe studious habits, must be avoided; and he should be as much in the open air as possible. The advice given on these points under *Indigestion*, will be applicable here. Temperance and exercise judiciously resorted to, and persevered in, have often wrought great and salutary changes in the gouty man's constitution.*

I would here earnestly recommend *friction* to the notice of the gouty sufferer. As a mode of exercise, and means of invigorating both locally and generally, it is of the highest value, and is particularly worthy of our attention in this complaint, because the patient is so frequently rendered incapable, for a long period, of resorting to the usual modes of exercise with much advantage. Under such circumstances, friction may be employed as an agreeable and certain means of restoring energy, at first to the limbs, and ultimately to the whole frame. It promotes circulation and perspiration, resolves obstructions, reduces swellings, and thickenings, and when persisted in daily,

* Sydenham, who is justly considered, by the physicians of this and every other civilized country, as one of the highest authorities in practical medicine, and who suffered severely from gout in his own person, says, "Exercise, unless it be used freely and daily, will do no service. A person may think this hard, who, besides age, inability to motion, and indolence, which is in a manner natural in this disease, is likewise tormented with pain; yet if exercise be omitted, all the remedies which have been hitherto discovered, will not at all avail." *Sydenham's Works*, p. 497. For illustrations of the remarkable power of exercise in the cure of this disease, see the small work entitled, "*Sure Methods of Improving Health, and Prolonging Life*," &c.

has an amazing effect in strengthening weak parts. Dr. Cadogan has observed, that when a gouty patient is unable to walk or ride at all, he may, by degrees, be brought to do both, by means of friction. This I firmly believe. Dr. Stukely, (a fellow of the London College of physicians,) affirms that he could produce about five hundred cases of gout, in which friction had been resorted to with the most signal and permanent benefit. It is applicable to the state of convalescence both from acute and chronic gout, and should be used twice or thrice a day, for ten, fifteen, or twenty minutes, or more, at each time. If the patient is not able to do it himself, an active servant must be employed until he is able, which will soon occur. It may be performed with flannels, flannel gloves, or a flesh-brush. The latter is in general the best instrument. In resorting to this remedy, the limbs and parts principally affected by the disease should claim the chief attention, but it may be carried over every part of the body with great effect. Next to the limbs, the region of the stomach and bowels ought to be attended to, as it is of very considerable service in promoting digestion, and increasing the appetite.

I have already said, that when the gout suddenly quits the limbs, and fixes on some internal organ, as the stomach, bowels, lungs, or head, for example, it is called *retrocedent* gout. The general idea of the nature of this affection, is, that it is spasmodic; but it may be either spasmodic or inflammatory. The parts most commonly attacked in such cases are, the stomach and intestines, and the symptoms present are exquisite pain and spasm, and usually sickness. If the attack be purely spasmodic, the muscles of the belly are rigidly contracted, pressure affords relief, and the pulse is not much affected. When, on the other hand, it is inflammatory, the parts are tender, and will not bear the slighest weight or pressure, and the pulse is either small and indistinct, or full, hard, and oppressed. In very delicate nervous subjects, the attack is often spasmodic; in the corpulent or vigorous, it is generally inflammatory, especially when it has followed imprudent exposure to cold.

The treatment of retrocedent gout will, therefore, differ, according as the attack on the stomach, intestines, or whatsoever part is affected, is spasmodic or inflammatory. If we have reasons, from the above considerations, to consider it spasmodic, five or ten grains of calomel should be given directly, which may be immediately followed by an injection, as No. 8, page 97, and when the stomach will retain a purgative medicine, by the draught No. 28, page 103. Fomentation of the bowels by means of flannels wrung out of hot water should likewise be employed at the same time, and if speedy relief is not gained

by these means, fifty or sixty drops of laudanum, or a third of a grain of the muriate of morphia, must be given in any warm drink, as brandy and water, &c. and repeated, if necessary, every half hour, till the pain abates. Musk and ether, either alone or combined, are also useful; and should the attack have followed excess or imprudence in diet, and sickness be present, vomiting should first be promoted by giving warm slops, and twelve or fifteen grains of ipecacuanha powder in water.

If the attack occur in a person of a full vigorous habit, and there is reason to regard it as inflammatory, the usual means for checking inflammation must be resorted to with promptness and decision. Sixteen or twenty ounces of blood must be taken from the arm, and the operation be repeated in a short time, if the pain continues; leeches may also be applied over the bowels; warm fomentations to the abdomen; and a mustard cataplasm be applied to the feet, in order to solicit back the gout to the extremities. After bleeding has been resorted to, a large blister should be immediately applied near the part affected.

When gout attacks the head, it is generally of an inflammatory nature, and will require cupping, blisters, mustard poultices to the feet, &c.

OF GRAVEL AND STONE.

The urine, in a state of health, is one of the most compound fluids of the animal system, consisting of various acids, alkalies, calcareous earth, and other materials; and it is, therefore, not surprising that, under the injurious, and often contrary influence of the many deteriorating causes to which man is incessantly exposed, the natural affinity between these various elements should frequently be subverted, and give rise to a deposition of one or other of them, thus producing the complaint called gravel.

The urinary sand or gravel deposited on the side or bottom of a receiving vessel is of two kinds, *red* and *white;* and it is of great importance to distinguish the one from the other, as they proceed from different causes, and require a different mode of treatment. The *symptoms* of *red* gravel are well known, The shade of colour may vary from a reddish-brown, or pink, to a perfect red. Here the urinary secretion is generally small in quantity, and high coloured, and the disease inflammatory: the nearer the deposit approaches to a perfect *red*, the more severe in general are the symptoms.

The *pink* sediment usually indicates uncommon irritability in the system. The most perfect specimens of this kind of

deposit are obtained from the urine of dropsical persons, those labouring under hectic fever, and those suffering from chronic disease of important internal organs, as the liver, bowels, &c.

White gravel is less common, but has long been observed to be attended by very distressing symptoms. They consist in great irritability of the system, and derangement of the digestive organs in general. There is often a sallow, haggard expression of countenance; and as the disease proceeds, symptoms somewhat analogous to those of diabetes begin to appear, such as great languor and depression of spirits, coldness of the legs, and other symptoms of extreme debility. The urine is invariably pale, and voided in greater quantity than usual; and after standing, for a greater or less time, always deposits a most copious precipitate of white impalpable powder. In all such cases, the urine is extremely prone to decomposition, and emits a most disgusting smell.

Those persons who habitually secrete urine that deposits a white sediment are generally pale and sallow; incapable of much bodily and mental exertion, and complain of lassitude and weariness.

In many persons there is an hereditary tendency to this complaint; general indolence, or a sedentary life, or an excessive indulgence in fermented liquors, and the luxuries of the table, become *predisposing causes* in others. But the chief cause seems to be a want of constitutional vigour, and especially in the digestive organs; and hence the periods of life in which this disease occurs most frequently are from infancy to the age of puberty, and in declining years: while it is rarely found during the busy and restless term of the prime of life. A cold and variable climate often becomes a cause, calculous complaints being seldom met with in warm climates; and the drinking of hard water often influences very sensibly the state of the complaint. White gravel may often be very distinctly traced to an injury of the back.

The urine, in a healthy state, is always an acid secretion, and it is the excess of its acid *(the uric or lithic acid)* that holds the earthy salts in solution. If, from any cause, it be deprived of this excess, or, in other words, the secretion of its acid be unduly diminished, the earthy parts are no longer held in solution, and a tendency to form *white* sand or gravel immediately commences. If, on the contrary, the acid be in greater excess than usual, instead of in deficiency, or the natural secretion of earth be deficient while the acid retains its usual measure, the acid itself has a tendency to form a deposit, and hence the modification of *red* sand or gravel (which is pure

lithic acid) that is so frequently found coating the bottom of chamber-utensils.

TREATMENT. *The red gravel* is by far the most frequent kind of deposit, and the most effectual remedies for it, are the alkalies, and the alkaline carbonates, such as lime-water, Brandish's alkaline solution, the carbonate of potash or soda, and magnesia. But to be really useful, as Dr. Prout* has very correctly remarked, they must be conjoined with alteratives and aperients; for it ought never to be forgotten, in the treatment of gravel and stone, that they owe their formation chiefly to a weakened and vitiated action of the digestive organs, which will invariably require this conjunction, in order to the accomplishment of a permanent beneficial effect.

Half a drachm, or a drachm, of carbonate of potash, or soda, may be given in water, once, twice, or thrice a day, with one of the alterative pills, No. 99, or 98, page 119, or four grains of the compound calomel pill, No. 117, page 124, or three grains of blue pill, every night; the following draught being taken every morning, or every other morning, as a gentle and suitable aperient:—

> Take of Rochelle salts, two or three drachms; carbonate of soda, one scruple; water, three table-spoonfuls. Mix, and after adding a table-spoonful of lemon-juice, or thirty grains of tartaric acid, let it be drank directly.

Instead of the carbonate of potash, a tea-spoonful, or two, of the alkaline solution, page 2, may be taken twice or thrice a day; and as it is directly tonic, as well as antacid, it will often be found a valuable remedy in all red deposits from the urine. It is particularly useful when red gravel is connected with gout, and the two diseases show a disposition to alternate. See what is said of it at page 2.

If the deposition of *red* gravel is accompanied with diarrhœa, lime water will be an appropriate remedy.

Sir Everard Home and Mr. Brande, have strongly recommended the use of magnesia in this species of gravel, and it is of considerable use. Mr. Brande has related a case which yielded to it, after the alkalies previously given had failed. It may be taken either alone, in doses of ten grains once or twice a day, or combined with the carbonate of soda, in the proportion of six or eight grains of the former to ten grains of the latter, twice or thrice a day. Or ten grains of magnesia may

* Dr. Prout has written one of the most valuable books on *Disorders of the Urinary Organs* that has ever appeared in this country, and I have much pleasure in recommending it to the notice of my afflicted readers. *Brodie's Observations on Disorders of the Urinary Organs* are likewise valuable.

be dissolved in a draught of soda water, which is an excellent way of administering it.

Alkalies should not usually be taken in the morning. The time when the urine is most acid, and alkalies principally required, is after dinner; they should be given three or four hours afterwards, for if sooner, they sometimes interfere with digestion. Often it is better for the patient to take his magnesia or alkali when he wakes accidentally in the middle of the night. In many cases only a single dose of magnesia at bed-time is required; but in others it will be found necessary in the middle of the day also.

Ten or fifteen grains of the carbonate of ammonia, twice a day, is likewise a useful medicine, especially in cases where great languor, or weakness and coldness of the stomach, is present. It is a powerful corrector of acidity, and a most valuable cordial.

Care is necessary in apportioning the dose of alkali in each individual case. If too little alkali is given, red sand is still deposited, though in smaller quantity; if too much, the urine is rendered alkaline, and a white sediment may follow.

A very convenient and valuable mode of combining an alkali with an aperient, and gentle bitter tonic, is as follows: it is worthy of particular regard when weakness of the stomach, costiveness, and red gravel are combined.

> Take of carbonate of soda, ten grains; Epsom salt, half a drachm, or a drachm; compound infusion of gentian, three table-spoonfuls; compound tincture of cardamoms, a tea-spoonful. Mix for a draught, to be taken three times a day.

The bowels should be kept gently open by it, and, therefore, the Epsom salt may be either increased or diminished, according to circumstances.

The powder of bear's whortle-berry is both tonic and astringent, and has been well spoken of, for its virtues in gravel and stone, by physicians of high authority. It may be alternated with the alkalies; and where general debility exists, or there is a discharge of pus-like matter from the bladder, denoting ulceration, or a very faulty condition of its secreting vessels, it is at once an appropriate and excellent medicine. The dose is from a scruple to a drachm of the powder, twice or thrice a day: or a strong tea may be made by pouring hot water upon the leaves of the plant, to three table-spoonfuls of which may be added ten grains of carbonate of soda, or a tea-spoonful of Brandish's alkaline solution, and drank thrice a day.

In *white* gravel the whortle-berry may be given with the nitric or muriatic acid.

A decoction of coltsfoot and wormwood, in equal proportions, is said to have wrought wonders in some calculous cases. I think very highly of these simples. A tea-cupful of the above decoction may be taken twice a day.

The diet of persons troubled with *red* gravel should be moderate in quantity, and of a nutritious and wholesome quality, consisting principally of fresh animal food, and farinaceous vegetables. All acids, and acescent food, must be carefully avoided, and likewise heavy bread, fat and hard-boiled puddings, and soups. Red wine is altogether objectionable, and but a small quantity of white wine should be allowed. Soda water should be the common beverage. Jelly or jamb made of the common bramble-berry will be found useful, taken as an article of diet, and spread on bread instead of butter. This appears to have been highly esteemed by Mr. Pott, a surgeon of great and deserved celebrity in the last century.

Constant active exercise is of great importance in all gravelly disorders; and flannel should be constantly worn.* Sailors and other persons accustomed to constant and laborious exertion in the open air, are very rarely affected with these complaints. M. Magendie, a celebrated Parisian physician, has given a striking example of the advantages to be derived from exercise and abstinence, and the mischievous effects of luxury, in the case of a merchant of one of the Hanseatic towns. "In the year 1814, this gentleman," says he, "was possessed of a considerable fortune, lived in an appropriate style, and kept a very good table, of which he himself made no very sparing use. He was at this time troubled with the gravel. Some political measures unexpectedly took place, which caused him the loss of his whole fortune, and obliged him to take refuge in England, where he passed nearly a year in a state bordering upon extreme distress, which obliged to submit to numberless privations: but his gravel disappeared. By degrees he succeeded in re-establishing his affairs; he resumed his old habits, and the gravel very shortly began to return. A second reverse occasioned him once more the loss of all he had acquired. He went to France almost without the means of subsistence, when his diet being in proportion to his exhausted resources, the gravel again a second time vanished. Again his industry restored him to comfortable circumstances; again he indulged in the pleasures of the table, and had to pay the tax of his old complaint."

* "But more, after all, is to be effected by attention to diet and mode of living, than by medicine." *Brodie on Disorders of the Urinary Organs, p.* 156. He adds, (*p.* 149) "Persons who lead a sedentary life, and who never take exercise so as to produce perspiration, are especially liable to the formation of red sand. It seems as if, during perspiration, something was carried off from the blood in the cutaneous vessels, which would otherwise cause the urine to be loaded with acid."

In cases of *white sand* or *gravel*, an acid is the best medicine, and all the acids seem to answer the purpose, though the muriatic, nitric, and citric acids, have been in the greatest repute. The citric acid, or lemon juice, is preferable for children, as being the pleasantest, and that which may be persevered in for a considerable time: it may be mixed with water in any proportion that is agreeable. The muriatic acid may be given in doses of from five to twenty drops, twice or thrice a day, in four table-spoonfuls of water; and the nitric acid in doses of from five to twelve drops, in the same proportion of fluid. Tonics also, as quinine, bitter infusions, the decoction of *pareira brava*, (page 67), and steel are likely to be useful. All mercurial preparations are likely to be injurious.

The general diet should be nutritious, easy of digestion, and moderate in quantity, and, if they sit easy on the stomach, it should be intermixed with acids, salads, fruits, and especially oranges and lemons. Malt liquor must be abstained from; and if the habit of the patient require that he should continue the use of wine, Champagne, Claret, or Hock, will be preferable to Madeira or Port. Water, saturated with carbonic acid, is the best common beverage in this kind of gravel, and, attention being paid to diet and exercise, will sometimes be alone a sufficient remedy.

If pain attend the gravel, opium or extract of henbane should be occasionally administered, according to the urgency of that symptom. Thirty or forty drops of laudanum, or from five to ten grains of the extract of henbane, may be given alone, or in any draught which the patient may be taking, and repeated until the pain is relieved. Opium seems generally preferable in the *white* gravel; and henbane in the *red*. In *white* gravel, the solution of acetate of morphia (Dr. Porter's formula) is particularly indicated as an anodyne, since the acid it contains is an appropriate and efficient remedy for the complaint, and, at the same time, counteracts the injurious effects likely to result from the frequent use of opium, when taken in any of its common forms. Dr. Prout has rightly remarked, that there is in all severe urinary diseases more or less of such irritability in the system, as is immediately and permanently relieved by the use of anodynes, especially opium. In case of great pain and irritation about the urinary organs, an opiate injection will be proper, and often of much service; or two or three grains of opium may be made into a pill and inserted within the rectum, as a suppository.

A Burgundy pitch or a galbanum plaster may be applied over the loins with advantage. If the symptoms are unusually

severe, and connected with manifest injury of the bladder or kidneys, a seton or issue should be instituted in the back.

Sometimes there is a secretion of a ropy mucus from the internal membrane of the bladder accompanying white gravel, when the exhibition of the decoction of the root of the *pareira brava* is, in many instances, productive of excellent effects.

Whether the gravel be white or red, when a small stone passes from the kidneys into the bladder, there is generally a fit of pain and irritation; to relieve which, the warm bath, or hot fomentations, together with forty or fifty drops of laudanum every three hours, will be the most proper and effectual remedies. The passing of a small stone from the kidneys to the bladder, is denoted by a fixed pain in the region of the affected kidney, with a numbness of the thigh on the same side. The pain is sometimes very acute, and accompanied with nausea and fainting, but the pulse is rarely accelerated. During the whole of the passage from the kidneys, the urine is usually high coloured, and frequently mixed with blood.

Before I conclude this article, it will be necessary to say a few words respecting stones or calculi in the bladder. They differ greatly in their composition, form, size, and colour; but by far the most frequent is the uric acid calculus; while the mulberry calculus is productive of the greatest suffering. Their magnitude is generally in an inverse ratio to their number: the average size may be compared with that of a chesnut, walnut, or a small hen's egg. The largest stone met with in this country is that which was taken from the bladder of the late Sir David Ogilvie. It weighed forty-four ounces, and was of an oval shape, its long axis measuring sixteen inches, and the shorter fourteen.

The symptoms of a stone in the bladder are, a sort of itching along the urethra, particularly at the extremity of the glans, from which the patient often acquires a habit of pulling the prepuce, which becomes very much elongated; frequent propensities to make water, and go to stool; great pain in voiding the urine, and difficulty in retaining it; the stream of urine, being liable to stop suddenly, while flowing in a full current, although the bladder is not empty, so that the fluid is expelled by fits as it were; and the pain being greatest towards the end of, and just after, the evacuation. There is a dull pain about the neck of the bladder, together with a sense of weight, or pressure, at the lower part of the belly; and a large quantity of mucus is mixed with the urine, and sometimes the latter is tinged with blood, especially after exercise. But all these symptoms are so equivocal, and bear so great a resemblance to the

effects of several other disorders, that they cannot be depended upon, and, consequently, no well informed surgeon will venture to pronounce positively that there is a stone in the bladder, unless he can distinctly feel it with a sound.

The causes of calculi are the same as those which give rise to gravel. They are much more frequent in Norfolk than in any other county in England; or than in the whole of Ireland or Scotland. It has been conjectured that women are less liable to the stone than men, but it is a question not yet completely settled. Infants, and children to the age of twelve or fourteen, are particularly subject to it.

The treatment of stone is precisely the same as that of gravel, both in regard to medicines and diet: if the urine deposits a *red* sand, the alkalies, and other remedies just mentioned, must be taken; if *white* sand, the acids. There is this difference between gravel and stone, that, in the former, active exercise is highly advisable; whereas, during the presence of an actual stone in the bladder, the patient's exercise ought, for obvious reasons, to be less active and constant.

Dr. Morris, of Canada, has lately found that an injection of castor oil, has great effect in relieving the sufferings occasioned by a stone in the bladder, and, as the pain and irritation arising from this cause are often very great, I have much pleasure in recommending it to the notice of those who are labouring under so severe an affliction, hoping that they may find it of inestimable advantage. Different considerations had inclined Dr. Morris to the opinion, that the introduction of a lubricating fluid into the bladder would, under such circumstances, be productive of ease and advantage, and, being afflicted with the stone, he soon had an opportunity of trying the experiment on his own person.

"I first took care," says he, "to rid myself of the contents of my bladder; this I had no sooner accomplished than, with a large syringe, I injected, through a small leaden tube reaching to the sphincter, about two ounces of cold-drawn castor oil, and I cannot express to you my feelings occasioned by the change which took place upon the moment of its introduction, for it seemed as if a new lower half had been given me. The absence of former painful symptoms still continuing, I went to bed, and can safely say, that I had not known, for some time previous, the pleasure of a sound and uninterrupted sleep. Latterly, I never awoke without a wish to make water, and the morning following was the first exception to it. When I did obey the call, I took care, finding that the oil came last, to leave as much within the bladder as I could. This I had little difficulty in effecting, as it does not dispose the bladder to contract as other fluids do."

After this, the bladder was constantly supplied with two or three ounces of castor oil, and under this treatment every symptom of irritation vanished, and during two months no one

symptom re-appeared to remind him of the existence of the calculous concretion.

When all the foregoing means of relief fail, and the general health is worn out by a long succession of pain and anxiety, nothing remains but the operation of extraction. In females, stones, even of a large size, may frequently, perhaps generally, be extracted by dilating the urethra, by means of sponge tents, to a size sufficient to allow the calculus to pass, without the use of a knife at all.

OF GREEN-SICKNESS, OR RETENTION OF THE MENSES.

Chlorosis, or green-sickness, is a complaint which occurs chiefly in girls about the age of puberty, and is characterized by a pale, blanched complexion, languor, listlessness, and depraved appetite and digestion; the several secretions being faulty or inert, especially at the commencement. It is called green-sickness from the pale, livid, and greenish cast of the skin, so commonly present in advanced cases.

The *symptoms* consist chiefly in a general sense of oppression, languor, and indigestion. The languor extends over the whole system, and affects the mind as well as the body; and hence, while the appetite is feeble and capricious, and shows a desire for the most unaccountable and innutrient substances, as lime, chalk, &c. the mind is capricious and variable, often pleased with trifles, and incapable of fixing on any serious pursuit. The heat of the system is diffused irregularly, and is almost always below the point of health; there is, consequently, great general inactivity, and particularly in the small vessels and extreme parts of the body. In advanced cases, the pulse is quick and low, the breathing attended with labour, the sleep disturbed, the face pale, the feet cold and swelled, the nostrils dry, the bowels irregularly confined, and the urine colourless. There is, also, sometimes an irritable and distressing cough; and the patient is thought to be on the verge of a decline, or perhaps to be running rapidly through its stages. Such severe instances of *Chlorosis* are not without danger. In general it is easily cured, but when swelling of the feet and legs, and other symptoms of dropsy are present, there is a proportionate degree of danger attending the complaint, and great attention must be given to it. In advanced cases there exists such an impaired condition of the blood, such a remarkable deficiency of this vital fluid, as calls for watchful attention.

All the symptoms indicate it to be a disease of debility. The

functions of digestion, assimilation, sanguification, nutrition, and generation, are inadequately performed. The *principal causes* are indigestion and constipation occurring at the age of puberty, combined with a want of energy in the organic nervous system, and in the excernent vessels of the womb, &c. which prevents them from fulfilling their office. Constitutional weakness and relaxation frequently dispose to green-sickness; and whatever enervates the general habit, or the stomach in particular, such as indulgence in heated rooms and late hours, long residence in crowded cities, insufficient or innutritious diet, and constipation, may be ranked among its causes.

Treatment. The great object of treatment is, to get the system into a state of good general health, by the use of tonics, alteratives, and aperients; in conjunction with horse exercise, change of air and scene, a moderate but nutritious diet, and cheerful society. Perhaps one of the best plans which can be laid down is, to give the patient one of the pills No. 97 directly, and repeat it at night three days after, then commencing immediately with the following steel pills, according to the directions subjoined to the prescription, a warm bath at from ninety to ninety-four degrees, being interposed once or twice a week. One or two of the warm aperient pills, No. 100, or 101, page 120, may be taken every other night, if necessary, so as to keep the bowels gently open. The *aperient electuary*, No. 37, page 105, is often a very valuable aperient in this disorder, especially when eruptions on the skin appear in its course. At the same time, the patient should take daily exercise in the open air, particularly on horseback, resorting to change of air and scene as often as circumstances will permit, and making use of nutritive food of easy digestion, with a small quantity of good home-brewed beer, or, should it agree well, one glass of white wine daily. The rules to be observed with respect to diet and regimen, are fully detailed at pages 154 and 177, and under *Indigestion;* and active friction twice a day, with the flesh-brush, or strong liniment of ammonia, over the region of the stomach and bowels, is highly advisable. Sometimes friction over the region of the loins with a strong liniment is useful. Friction is often of considerable service here, and as it is a remedy within the reach of every female, should never be disregarded. It should be performed by the patient herself, at least night and morning, for fifteen minutes at each time.

Take of sulphate of iron, twenty grains, socotorine aloes, three grains; ipecacuanha, in powder, three grains; aromatic powder, six grains; extract of gentian, two scruples.—Mix, and, with a little syrup, make the whole into a mass, to be divided into twenty pills. Two to be taken three times a day.

Iron has always been found one of the most valuable tonics in green-sickness; and the sulphate here ordered, may be gradually increased to thirty or thirty-five grains in the twenty pills. But if it does not suit, or fails in producing the desired effect, the following form may be used:

Take of the steel pill with myrrh, two drachms; of the aloes pill with myrrh, (both as ordered in the Pharmacopœia), a drachm; powder of capsicum, twelve grains; syrup, a sufficient quantity to make a mass.—Divide it into forty pills, and take two pills twice or thrice a day.

A simpler form of pills is as follows, and one which in very many instances will be found equal in their efficacy to any that can be prescribed. Indeed, some physicians have found them quite sufficient to cure the majority of cases.

Take of socotorine aloes, sulphate of iron, of each, two grains; gum mastic, one grain; oil of cloves, a sufficient quantity to make one or two pills, to be taken every day before dinner.

The Tunbridge water is a strong chalybeate, and very serviceable here; so that Tunbridge Wells is among the best places to which chlorotic girls, in the higher ranks of society, can resort. If the stomach be weak and irritable, the fresh-drawn water is apt to prove too cold, and to occasion nausea and sickness, which inconvenience may be prevented by putting it into a bottle, which should be closely corked, and then immersed in hot water.—See page 137.

Should the disorder commence with considerable swelling of the glands of the neck, small doses of *iodine*, (page 40), given thrice a day, with five grains of the myrrh and aloes pill every night, may be advantageously tried, if the foregoing means have not proved effectual.

For the pain in the head and side, when severe, a blister is one of the best remedies. No blood-letting must be attempted: it would be highly injurious. A little tincture of hyosciamus in water may be given for the relief of palpitation.

Some physicians have employed cold bathing, but I decidedly prefer the tepid bath. Dr. Saunders used to say, that, according to his observation, the cold bath is injurious in this complaint, but warm bathing often of essential service.

Electricity, in the form of sparks drawn from the lower belly, or of slight shocks passed through it, may be resorted to in obstinate cases, and frequently with a prospect of advantage. In some cases, I should place much confidence also in Lavagna's injection, as described under *Suppression of the Menses;* and in the volatile tincture of guaiacum. From thirty drops to a tea-spoonful of this tincture may be administered in milk,

three times a day. It is a valuable and appropriate stimulant and alterative.

For the acidity on the stomach, which is often a troublesome symptom here, a tea-spoonful of Brandish's alkaline solution may be taken occasionally in a cupful of linseed tea, or beer.

Now and then it happens, that symptoms of green-sickness appear in florid, full-bosomed girls, who have no mean share of general vigour, in which case the pulse is full and tense, and the pains in the head and loins very severe. The ordinary cause, in this species, is catching cold in the feet at the period of the menstrual discharge; and the plethoric condition of the patient will bear and require *at the commencement* small bleedings by leeches, from the abdomen or loins, and cooling purgatives, as No. 73, or 74, page 114. The warm bath also should be steadily used, with a plain diet, and regular exercise.

OF GUTTA SERENA.

Gutta serena, or amaurosis, is that diminution or total loss of sight, which immediately depends upon a diseased state of the optic nerve, and its expansion on the bottom of the eye. It is a blindness in which the pupil is generally dilated and immoveable, but without any other apparent defect. When vision is completely destroyed, it is called *perfect* gutta serena, when only diminished, *imperfect*.

One of the most common *symptoms* of a beginning amaurosis, is an appearance, in the patient's fancy, as if gnats, flies, or serpentine diminutive bodies were flying before his eyes; or there appears an immoveable black speck; or all objects seem covered with a dense mist. Sometimes objects appear indistinct, but double; or the patient seems to see through a network, or gauze; and occasionally objects are seen, in the beginning pretty distinctly, but appear of a different colour from the real ones. Frequently a defective, interrupted sight is present, a greater or less portion of objects being undistinguishable. The generality of patients who have a beginning imperfect amaurosis, can always see objects, laterally situated, better than those which are immediately before them; and a degree of squinting is a very common symptom, particularly when only one eye is affected.

This disease may attack both eyes at once, or only one. It may take place quickly, so as to be complete in a few days or weeks, or, what is most frequently the case, may be produced gradually, several years elapsing before it attains its utmost degree. It may, likewise, be either permanent or temporary.

As the accompanying symptoms are liable to great variation,

so are the *causes* to much obscurity. The principal causes appear to be, a diseased condition of the digestive organs; general or local debility of the nerves; an extraordinary fulness of the blood-vessels of the brain, or of those of the optic nerve, —or other sources of compression; the suppression of habitual discharges; external injuries of the head; violent gusts of passion; immoderate salivations; a fixed attention to minute objects too long continued; sudden fright.

According to Richter, the periodical gutta serena commonly depends upon irritation affecting the digestive organs, the stimulus of worms, or irregularity in the menstrual discharge.

It is *distinguished* from cataract by the blackness and dilated state of the pupil, and by the absence of any other apparent defect.

TREATMENT. As in all other complaints, the treatment must be regulated, in a great measure, by the age, habits, and condition of the patient, and by the nature of the causes which have given rise to the amaurosis. If it seem to arise from a preternatural fulness of the blood-vessels of the brain, or eye, the quantity of blood must be diminished by bleeding from the arm, or by the use of leeches. Twelve or sixteen ounces of blood may be taken from the arm, and afterwards ten or twelve leeches applied to the temples and neck; a dose of the aperient mixture, No. 73, page 114, being given every other morning, and the alterative pill, No. 99, page 120, every night. This plan is clearly not applicable to debilitated nervous patients, but to the plethoric and strong it is sometimes of much service. Richter, a celebrated German surgeon, informs us of a woman, who, on leaving off having children, lost her sight; but recovered it again by being only once bled in the foot. Schmucker, another German surgeon of reputation, relates, that by means of bleeding, and an emetic, he has often restored the eye-sight of soldiers, who had lost it by making forced marches with heavy burdens. If this disease follow violent anger, the same treatment is indicated. A clergyman (unhappy man!) became completely blind, after being in a furious passion, but his eye-sight was restored the very next day by means of an emetic, which was given him with a view of relieving some obvious marks of indigestion in the stomach.

In gutta serena, arising from the suppression of the menses, leeches should be applied to the external sexual parts, the feet bathed once or twice a day in warm water, the emetic, No. 29, page 103, being also administered, and afterwards Richter's resolvent pills, noticed below. If these means fail in re-establishing the discharge, great confidence may be placed in a stream of electricity, conducted from the loins across the pelvis,

in every direction, and thence repeatedly to the thighs and feet. This plan has frequently succeeded after a trial of several weeks.

In amaurosis from general nervous debility, excessive loss of blood, convulsions from want of food, and long continued intense study, especially by candle-light, the alimentary canal should be regulated by one of the aperient pills, No. 100, or 101, page 120, given every other night, with tonic cordial medicines in the day, as cascarilla, columba, or bark infusion, with tincture of the same, and carbonate of ammonia. See No. 77, 79, 82, or 83, page 115. At the same time, the vapour of the water of ammonia should be applied to the eyes, night and morning, by the patient's holding a cup, containing that liquid, sufficiently near the eye, to make them feel a smarting, occasioned by the very penetrating vapours with which they are enveloped. Every thing which has a tendency to weaken the nervous system must be sedulously avoided; the diet should be nourishing, and of easy digestion; and the exercise, in fair weather, should be constant, especially on horseback. Cold bathing may likewise be resorted to.

But it is highly probable, that the curable species of this disease, commonly depends on some disease or irritation, existing in the stomach and bowels, which is occasionally complicated with general nervous debility, in which the eyes participate. Here the most efficient mode of treatment, is to exhibit mercurial alteratives, as the pill, No. 98, page 119, every night, with tonics and aperients during the day, the tonics being such as No. 102, 104, 106, or 115, or a course of sarsaparilla pills; the diet and regimen being the same as described under *Indigestion*. Mr. Travers is partial to a course of the blue pill, gentle saline purgatives and bitter tonics. Mr. Lawrence (*Lectures in the Lancet, vol.* ii. *p.* 714, 1829-30,) considers the antiphlogistic treatment in general the most proper, and consequently his chief remedies appear to be blood-letting, "and afterwards the use of mercury, so as to affect the system." He is an enemy to tonics and stimulants. I cannot think the disorder so frequently calls for the use of so much blood-letting, or so active a use of mercury, as he advocates; but believe that a slight affection of the gums by the employment of mercury, is often of signal service.

Richter recommends a vomit of tartar emetic at the commencement, which is to be repeated to the third or fourth time, at intervals of a day or two, according to the state of the tongue, and the bitter taste in the mouth. After this, three of the following pills are to be given twice a day, for a month or six weeks.

Take of ammoniac gum, assafœtida gum, Castile soap, of each, one drachm; rhubarb, in powder, a drachm and a half; tartarized antimony, sixteen grains; syrup of buckthorn, a sufficient quantity to form the whole into a mass, to be divided into sixty pills.

After using these pills, as ordered, he prescribes that an ounce of bark, and half an ounce of valerian powder, should be divided into six equal parts, one of which is to be taken in the morning, and another in the evening, in any convenient vehicle, for at least five or six weeks. The patient's food ought to be nourishing, and of easy digestion, with a moderate quantity of white wine, and proper exercise should be taken in a salubrious air. For exciting the action of the nerves of the eye, the vapour of water of ammonia, already spoken of, is of the greatest service: these vapours may be employed directly after the emetic has operated, and should not be discontinued till long after the eyes have been cured. Frequent blisters may also be applied to the temples, and nape of the neck; and likewise friction on the eye-brow, with eau de Cologne, or Hoffman's anodyne liquor; the irritation of the nerves of the nostrils by the sternutative powder of Mr. Ware; and electric sparks or streams.

If an unusual dryness of the internal membrane of the nose is perceived, it will be right to make use of a mercurial snuff. Mr. Ware's snuff, on which he sometimes placed much reliance, is composed of ten grains of turbith mineral, and a drachm of liquorice powder, or common sugar. A small pinch of this snuff, taken up the nose, generally occasions a very large discharge of mucus. Both Mr. Ware, and Mr. Hey, of Leeds, relate several cases of the present disease which were cured by electricity; and I am inclined to consider it as often a valuable remedy, and one which ought never to be left untried, unless there are circumstances in the case which contra-indicate its employment. It has been particularly useful in amaurosis originating from lightning; and, in general, the pupil has been dilated in the cases benefited by it.

But sometimes the pupil is contracted in gutta serena, when the oxymuriate of mercury may often be resorted to with great advantage. It is especially indicated when an internal inflammation of the eye is the original cause of this disease. From thirty to fifty drops of the solution of oxymuriate of mercury, may be taken at breakfast and tea-time, and should be continued uninterruptedly for many weeks. I have just left a patient afflicted with amaurosis in both eyes, who has used this medicine with excellent effect in subduing the excruciating pain in the eye-ball and forehead under which she has laboured, and in strengthening the stomach and general habit. It is an

appropriate medicine when the complaint is connected with syphilis.

A very short time since, a Wesleyan-methodist minister, of the name of Stanley, was perfectly cured of amaurosis in both eyes, by the single use of a large blister applied down the spine. The blister was nine inches long and three broad, and reached from the nape of the neck downwards. He had some time before consulted several able oculists and surgeons to little or no purpose; and further relates, that a patient to whom he has since recommended the same means, has been completely cured by it.

It is said, that an infusion of Cayenne pepper has been successfully employed in the Liverpool infirmary.

Take of Cayenne pepper, in powder, two grains; hot water, two drachms.—Macerate for an hour, and then strain for use. A drop or two, is to be dropped into the eye night and morning.

OF INJURIES OF THE HEAD.

Injuries of the head from blows, falls, or other external violence, may be divided into the two states of *concussion* of the brain (commonly called stunning,) and *compression*.

The *symptoms of severe concussion* are, total insensibility, the patient scarcely feeling any injury that may be inflicted upon him,—loss of voluntary motion,—difficult breathing, but in general without the stertorous noise,—intermitting pulse,—cold extremities,—contracted pupil; after a longer or shorter time, there is sickness,—the pulse and breathing become better, and though not regularly performed, are sufficient to maintain life, and to diffuse a little warmth over the extreme parts of the body,—the feeling of the patient is now so far restored, that he is sensible if his skin be pinched, but lies stupid and inattentive to slight external impressions. As the stupor goes off, inflammation very frequently arises.

If the injury to the head be such that a portion of bone is driven inwards, or blood is poured out on the surface of the brain, *symptoms* often occur *denoting compression;* they are insensibility and loss of voluntary motion,—laborious breathing, with a stertorous noise,—slow labouring pulse, but not generally intermitting,—cold extremities,—pupils of the eyes much dilated, but no sickness, at least till the compression is removed by the use of the proper instrument, or other means. There is no return of feeling, so that the patient is insensible to pinching, or other injuries inflicted, until the pressure is taken off from the brain.

Treatment. The best treatment at the commencement of

a violent stunning, is to place the patient in a warm bed, to apply bladders of hot water over the region of the heart and stomach, and to employ gentle friction to the limbs. When he begins to recover, a little warm slop may be given, but no brandy, wine, or other stimulants, for all severe injuries of the head are liable to be followed by inflammation, and we should have our eye to this probable consequence for many days after the receipt of such an injury. It was formerly a common practice in cases of concussion to apply strong stimulants to the nose, and to administer them internally, but these are now abandoned by all good surgeons, for the reasons just given. The patient must be kept quiet, and have a black draught to empty the bowels. If, as he recovers sense and the power of motion, he grows irritable, and has pain in the head, and flushing of the face, we should anticipate inflammation by taking a pint of blood from the arm, and giving some more purging physic; and should active inflammation of the brain supervene, the means noticed under that head must be rigorously enforced.

In *compression*, it will frequently be necessary to employ an instrument called a trephine, in order to raise the depressed portion of bone, or to remove blood which may have been poured out and be pressing down the brain, which operation falls, of course, to the province of the surgeon; and a full consultation should always be had previous to resorting to it. It sometimes happens, however, that a man will fracture his skull without any decided symptoms of compression taking place, at least immediately; men have walked to a public hospital after such accident. In this case, it appears to me the soundest practice not to trephine, unless symptoms of compression of the brain should subsequently appear; for this is a very severe operation, and patients who have been trephined under these circumstances, without evident signs of compression existing, have generally died, while those upon whom no operation has been performed, have as frequently recovered.

In all wounds and lacerations of the scalp, it is now the universal practice of well-informed surgeons to free the torn piece from dirt, or foreign bodies, and restore it as quickly, and as perfectly as possible to its natural situation. No cutting away any part of the scalp is, at this time, ever advised; and it is very rarely that sewing is necessary, the application of slips of adhesive plaster being almost invariably sufficient to insure the union.

OF HEAD-ACHE.

Head-ache is a very common complaint, and is of different kinds. The chief species are the sick head-ache, the nervous head-ache, the rheumatic or chronic head-ache, and the hemicrania, or head-ache affecting only one side of the head.

The sick head-ache is by far the most frequent. It sometimes commences in the after part of the day, but more commonly in the morning, affecting only some particular part of the head, most frequently the forehead, and extending over one or both eyes. There is some degree of nausea or sickness usually connected with it; and the duration of the pain varies from two or three hours to twenty-four hours, or longer. Its returns are very irregular; but those who use but little exercise, are inattentive to their diet, and are confined in their bowels, suffer most frequently and severely.

The *nervous head-ache* generally occurs in persons with a peculiar irritability of the nervous system. It is particularly apt to arise after any unusual exertion of mind or body, or any sudden emotion of the mind, whether pleasing or painful; and is, I think, most frequent in the afternoon or evening, being always very much, or entirely relieved by sleep.

The *rheumatic*, or *chronic head-ache*, is often connected with rheumatism, and frequently arises from the same causes. It is not unfrequently periodical, the pain is very acute, and motion of the head highly irksome.

Hemicrania is distinguished by its being confined to one side of the head. Its seat seems to be chiefly in the integuments of the head, and its principal symptoms are, tenderness on pressure, an obscure redness of the skin, and a suffusion of the eyes.

All these species of head-ache are closely connected, and are apt to run into each other. The most *common cause* of head-ache is an unhealthy condition of the digestive organs, especially of the stomach and bowels; constipation is a fruitful source of these pains. The other chief causes are local irritation, suddenly checked perspiration, exposure to cold and damp, weakness or irritability of the nervous system, and the suppression of some accustomed discharge. All debilitating causes may be considered as giving rise to these pains. I have just seen a lady who was, a short time since, afflicted with a violent rheumatic head-ache from suckling her child too long; it ceased immediately the child was weaned. Another has lately presented herself, who has been tormented with a violent hemicrania, apparently the effect of an attempt to dye the hair of her head, by the use of some *nostrum* sold for that purpose.

TREATMENT. As head-ache is in general a symptom of indigestion. or deranged general health, (page 307,) or a consequence of a confined state of the bowels, one of the most efficacious plans of treatment is to administer a mercurial alterative every other night, with a bitter or metallic tonic in the day, or the sarsaparilla or dandelion, and to keep the bowels regular by means of a mild aperient pill. Attention should at the same time be paid to diet, exercise, and regimen, as directed under *Indigestion.* The alterative pill, No. 98, or 99, page 120, will be found a valuable medicine, and one or two of the aperient pills, No. 100, or 101, page 120, taken every other night, or a little *Beaume de Vie* every other morning, is highly advisable. A dose of the tonic mixture of the infusion of gentian, with carbonate of soda, No. 83, page 116, may be taken twice a day; or a metallic tonic, as the carbonate of iron, ammoniate of copper, or oxyde of zinc, may be tried. They are often of essential service, and may be taken as directed under *Epilepsy.* The pills, No. 102, page 121, or No. 104, I have known of the greatest use. These are means which are more or less applicable to all head-aches, as they are calculated to correct internal disorder of whatever kind, and to strengthen the general constitution. In many cases they will prove of immediate and striking utility; but they should never be dropped under six weeks, and in obstinate, or long continued instances, will require a perseverance of double this time, in order to their full and permanent effect. When quick relief is sought, the temples may be bathed with eau de Cologne, or with a mixture composed of equal parts of rose-water and spirit of mindererus; and a dose or two of Battley's opiate drops (page 49) may be taken in strong coffee, or any other agreeable vehicle.

If the habit be plethoric, or there appears a preternatural fulness in the blood-vessels of the head, a few leeches should be occasionally applied, but the principal dependence ought to be on the above treatment.

A similar plan will be advisable in *nervous* head-ache, with which should be combined, horse exercise, and the cold bath. The assafœtida aperient pills will be most useful here; and the ammoniate of copper, as a tonic, is particularly indicated. If the pain be periodical, bark should be tried, or the solution of arsenic, which Dr. Fowler, of York, has found very beneficial. Four or five drops of this solution may be given, twice or thrice a day.

In the *rheumatic* species, three or four grains of the compound powder of ipecacuanha, taken two or three times daily, with the aperient pills above recommended, every other night, will be found of eminent service: or thirty drops of the volatile

tincture of guaiacum may be taken in milk, twice a day, with the following pill at bed-time:

Take of aloes pill, with myrrh, five grains; antimonial powder, or, what is better, true James's powder, four grains; syrup of buckthorn, a sufficient quantity to make the ingredients into two pills. To be taken nightly, or every other night.

Sometimes the chronic head-ache is connected with a caries of some bone within the head, when the compound decoction of sarsaparilla, or the compound extract in pills, should be taken with the pill, No. 117, page 124. If such a head-ache follow syphilis, or the free use of mercury, the compound decoction of sarsaparilla should be trusted to without the alterative pill: but the patient may take four grains of compound ipecacuanha powder at bed-time, instead of that pill.

The *hemicrania* may be treated in the same way as the sick head-ache. In addition to the remedies already recommended for that species, the patient may here try five or ten grains of the extract of henbane, or ten grains of carbonate of ammonia, twice or thrice daily, which are sometimes valuable medicines in head-ache.

When this complaint appears as a sequel upon any suppressed evacuation, or repelled eruption, the best means of obtaining relief will always be found in restoring the system to its former state, by the frequent employment of the warm bath, leeches, and stimulating poultices; and where this restoration cannot be effected, we must furnish the best substitute we can by some temporary irritation or drain, by means of the tartar emetic ointment rubbed on the back, or other parts of the body, or by an issue. An issue or a seton will often prove of the greatest advantage in obstinate and severe head-aches. In the *Transactions of National Curiosities* is a case of ten years' duration, completely cured by the last application.

Ray, the botanist, relates a remarkable cure of a Mr. Oldacre, who by snuffing up the juice of ground ivy was cured of an inveterate head-ache.

In many severe head-aches, I should place much confidence in electricity in the form of aura, or gentle sparks drawn from the head, in conjunction with the general remedies advised at the commencement of this article. The use of a strong snuff is likewise often of material service, by promoting a discharge from the vessels of the nose and head. In very obstinate cases, a snuff composed of turbith mineral mixed with a little sugar, should always be tried. See page 444.

In strong persons, who have a great deal of blood flowing to the head, I have known the use of a wet night cap cure the

head-ache. Their common night cap was dipped in cold water, wrung out, and then slept in till the morning, for two or three nights in succession, if necessary. But it is a measure not applicable or safe in weakly persons.

A palliative remedy of much service in most cases of head-ache, is smelling to horse radish, fresh scraped. It is applicable to almost every kind of this affection.

It is worthy of especial notice, that whatever remedy is resorted to in this complaint, the regulation of the bowels, and attention to diet and exercise, should never be neglected.

OF HEARTBURN.

Heartburn is a burning or gnawing uneasiness at the pit or upper orifice of the stomach, mostly attended with offensive eructations and other symptoms of acidity, and frequently with nausea. Sometimes vomiting occurs, with anxiety and tendency to faint.

The upper orifice of the stomach, called *cardia*, is particularly sensible, and, therefore, liable to evince symptoms of irritation from the presence of acidity, or other irritating causes in that organ, whence the present complaint is denominated, in technical language, *cardialgia*. But irritability of the whole, or any other part of the stomach, and perhaps of the adjoining organs, as the first intestines, pancreas, and liver, will often produce the same local pain. In a few instances, it has been ascertained after death to have been occasioned by some positive disease of the lower orifice of the stomach.

The most frequent *cause* of heartburn is the presence of acidity in the stomach, from too great an indulgence in oily indigestible food, or other articles of diet which disagree with the individual, and tend to weaken the stomach. Indeed, whatever debilitates this organ may be considered as a cause, and, therefore, it arises from an habitual and copious use of very cold or very hot beverages; indulgence in spirituous liquors; worms; violent purges; obstructed perspiration; and swallowing stones or kernels of fruits. Cheese eaten in excess has produced a heartburn that continued for three years. To so great a degree does the acrimony from acidity sometimes arise, that the contents of the stomach, when rejected on a marble hearth, has been seen to produce an effervescence on it.

Treatment. One of the most powerful remedies for heartburn is the *alkaline solution* (page 2). A tea-spoonful should be taken thrice a day, in linseed-tea, beer, or milk and water. The alkalies have always been resorted to as the most efficient medicines in this complaint; and the alkaline solution enjoys a

great advantage over many, perhaps all of them, inasmuch as it at once neutralizes the offending acid, exhilarates the spirits, and strengthens the stomach and whole constitution. Consequently, it is calculated to palliate the present distress, and by perseverance to prevent a recurrence of the paroxysms, by imparting tone to the digestive organs.

A combination of soap and ipecacuanha is another excellent medicine, and rhubarb may often be added with great advantage.

Take of Castile soap, three drachms; ipecacuanha, in powder, twenty grains; syrup, a sufficient quantity to form the ingredients into a mass. To be divided into forty pills: two of which are to be taken twice a day.

Dr. Cullen, of Edinburgh, was partial to the use of soap, and the following is another very useful form for its exhibition. It forms a bitter alterative and tonic, which is likely to prove, in many instances, of durable advantage.

Take of Castile soap, two drachms; ipecacuanha, in powder, twenty grains; extract of chamomile, one drachm.—Mix, and divide into forty pills. Two to be taken three times a day.

Magnesia is often a valuable medicine here. Ten grains of it may be taken in a glassful of soda water, or be united with the same quantity of columba powder, and repeated twice or thrice daily.

Sometimes, however, the mineral acids will check fermentation in the stomach more effectually, and be more permanently beneficial, than any alkali. Six or seven drops of pure nitric or sulphuric acid should be taken, either in a large wine-glassful of water, or infusion of cascarilla bark, and repeated three or four times in the twenty-four hours. If sickness attend heartburn, the nitric acid is often eminently serviceable.

But now and then acidity and heartburn will be incorrigible, either by alkalies or acids, even though the patient confines himself almost entirely to a diet of animal food alone. In such cases, ox-gall has been found completely successful; and is by some professional men considered to be infallible.

Take of fresh ox-gall, thirty grains; assafœtida gum, twenty grains.—Mix, and divide into twelve pills. Three to be taken thrice a day.

The diet should consist of articles least disposed to ferment, and most easy of digestion, as fresh animal food, eggs, biscuit, and bread; and for drink, good malt liquor, weak brandy and water, lime-water, or toast-water. Friction over the region of the stomach will likewise be advisable, with the other resources in point of regimen and diet described under *Indigestion.*

In all cases of heartburn, the bowels should be kept regular by the use of the aperient pill, No. 100, or 101, page 120. The reader will perceive, from what has just been said, that the present complaint is most commonly a symptom of Indigestion, and that all the means noticed under that head are applicable here, a constant regard to the quantity and quality of the food being, in the majority of instances, absolutely necessary to a perfect cure.

OF HICCOUGH, OR HICCUP.

Hiccough is a convulsive catch of the muscles of respiration, attended with a sonorous inspiration, and returning at short intervals.

Though the spasmodic action in this affection exists chiefly in the midriff, the principal seat of the disease is the stomach. Debility, from whatever cause arising, is the ordinary predisposing, and some accidental stimulus the exciting cause; excess of food, and especially in a weak stomach, is often a sufficient stimulus; and hence the frequency of the complaint among infants. It is likewise produced by acidity, worms, external pressure on the stomach, and eating too fast.

Treatment. This affection cures itself in ordinary cases; and if not, it usually yields to a simple antispasmodic, as a draught of cold water, or thirty drops of spirit of hartshorn, or sal volatile, or a dose of any other volatile spirit, in any agreeable vehicle. Holding the breath will frequently succeed. But where this does not prove sufficient, fifteen or twenty drops of laudanum may be given in a little mint water; and should the complaint show a disposition to a frequent return, the means recommended under *Indigestion*, for strengthening the stomach and system in general, must be resorted to in the intervals. A warm bitter, as No. 106, page 115, or No. 130, page 127, with pure air, exercise, and cold bathing, will be found of great service in obstinate cases, the bowels being regulated by the occasional use of the aperient pill, No. 100, or 101, page 121. The pill No. 104 is simple, but very efficacious, especially if the pill No. 99 be also taken every second night. In the hiccough attending asthma, and in some other instances, a little common or distilled vinegar is sometimes an effectual remedy.

One of the best medicines for this disorder in infants, is a little magnesia given in mint water, about once a day, for a week or two; or the magnesia may be combined with a small proportion of rhubarb. Six or eight drops of sal volatile, in water, is likewise a useful remedy for infants; or the pit of

the stomach may be frequently rubbed with a little soap liniment.

All persons subject to frequent hiccough, should be attentive to their diet, and the regulation of their bowels, and resort to the usual means for strengthening their digestive organs.

The magnet promises to be of great service in obstinate cases of hiccup. It is used by applying two strongly magnetised steel plates, a twelfth of an inch in thickness, of an oval shape, and bent so as to fit the part,—one to the pit of the stomach, and the other opposite to the spine, so that the magnetic current shall traverse the affected part. A French physician, (Laennec) of acknowledged judgment and high authority, says, "By means of these plates I stopped, at once, a hiccup which had lasted three years. At the end of six months, the patient having one morning neglected to put on the plates, the hiccup returned, but was removed upon their being replaced." *

OF HOOPING-COUGH.

This is a convulsive cough, accompanied with a shrill hoop, and returning in fits that are frequently terminated by vomiting. The Greeks called it the "wild or untameable cough," from its violence; and, in the north of Europe, it is called chin-cough, or kin-cough.

The disease comes on with a slight difficulty of breathing, thirst, quick pulse, hoarseness, cough, and all the symptoms of a common cold. In the second or third week after the attack, it puts on its particular and characteristic symptoms: the expiratory motions, peculiar to coughing, are made with more rapidity and violence than usual; and, after several of these expirations thus convulsively made, a sudden and full inspiration succeeds, in which, by the air rushing through the top of the windpipe with unusual velocity, a peculiar sound is caused, which has obtained the name of hoop. When this sonorous inspiration has happened, the convulsive coughing is again renewed, and continues in the same manner as before, till a quantity of mucus is thrown up from the lungs, or the contents of the stomach are evacuated by vomiting, which generally terminates the fit; the patient is then most frequently enabled to

* The magnet will sometimes be of great use in the nervous pains felt in the left breast and region of the heart, and which simulate *angina pectoris*. Magnetism was too much cried up by some medical men and others in the last century, but it appears to be too much neglected at present. That it acts on the animal system is sufficiently proved by the fact of its giving rise not only to very obvious general effects, but even to local ones. After a certain time, it commonly produces an eruption of small pimples, which are sometimes so painful as to oblige us to interrupt the process for some days. This effect cannot be attributed to the action of the oxidized plates on the skin, as the eruption almost always takes place under the anterior one.

return to the amusements he was employed in before its accession, and often expresses a desire for food; but when the attack has been severe, it is succeeded by much fatigue, hurried breathing, and general languor and debility. After a longer or shorter continuance of the disease, the paroxysms become less severe, and at length entirely cease. In some instances, it has, however, been protracted for several months, and even for a year.

Although the hooping-cough often proves tedious, and is liable to return with violence on any fresh exposure to cold, when not entirely removed, it nevertheless is seldom fatal, except to very young children, who are always likely to suffer more from it than those of a more advanced age. The danger seems always to be in proportion to the youth of the patient, to the degree of fever and difficulty of breathing which accompany the disease, and to the state of debility which prevails.

Children are most commonly the subjects of this disease, and it appears to depend on a specific contagion, which affects them but once in their life. The disease being produced, the fits of coughing are often repeated without any evident cause: but, in many cases, the contagion may be considered as only giving the predisposition, and the frequency of the fits may depend upon various exciting causes, such as too full a meal, the having taken food of difficult digestion, and irritation of the lungs by dust, smoke, or disagreeable odours. Emotions of the mind may likewise act as an exciting cause.

Its immediate cause seems to be an irritation and inflammation (in the majority of instances moderate) of the windpipe, and its terminations called *bronchia*. When death occurs, it seems owing to the supervention of *acute bronchitis*, that is, inflammation of the bronchia.

It is clearly *distinguished* from other coughs by the peculiar hoop; and it may very often be recognized, before this sonorous inspiration occurs, by an evident swelling of all or most of the features.

Treatment. *The indications of treatment in hooping-cough are two-fold; viz. in the early stage of the disease, to moderate its violence, and to palliate urgent symptoms; and, in the advanced period, to interrupt its course, and to oppose the spasmodic habit by antispasmodic remedies.* This was the mode of cure adopted by Dr. Cullen, the celebrated medical professor at Edinburgh, and it is well founded. To moderate the violence of the symptoms in the commencement, it will frequently be necessary to bleed, if the difficulty of breathing and fever are considerable. One of the most dangerous attendants of hooping-cough is an inflammation within the chest, and should the child have per-

manent difficulty of breathing between the fits, we may be almost certain of the existence of inflammation, when blood-letting will be absolutely necessary; which should invariably be accompanied with the use of a pill composed of a grain of calomel, a grain or two of James's powder, and the eighth or tenth of a grain of opium, every three or four hours, until the alarming symptoms subside. In children, bleeding is best performed by applying six, eight, or ten leeches to the chest or temples; but it must not be resorted to except in severe cases.* When the symptoms of difficult respiration are severe, threatening suffocation, leeches applied to the upper part of the throat, the top of the windpipe, are often of signal benefit. There is often serious affection of the brain in the worst cases of hooping-cough, and, therefore, leeches applied to the temples or behind the ears, are sometimes found of uncommon service. An occasional emetic of ipecacuanha or antimonial wine, is an excellent remedy in the beginning, and will generally supersede the necessity of blood-letting; it clears the stomach, relaxes the skin, moderates the fever, and tends to keep the bowels open. From a tea-spoonful to a table-spoonful of either of these wines may be given every other morning, the following febrifuge mixture being taken during the day:

> Take of solution of acetate of ammonia, one ounce; wine of meadow-saffron, half a drachm; water, four ounces and a half; syrup of buckthorn, two drachms.—Mix. Dose for a child of four years old, one table-spoonful three times a day.

In this disease, unless the child is under twelve months old, antimonial wine is to be preferred to ipecacuanha.

Should the paroxysms be violent, and the patient's friends object to the employment of leeches, or have applied them without much benefit, the tartar emetic ointment ought to be rubbed on the chest three or four times in the twenty-four hours, till an eruption appears, when the using it once a day will be sufficient. It is made by rubbing together, in a mortar, a drachm of tartar emetic and an ounce of hog's lard; about the size of a common nut being rubbed on the chest at each application. Its effects are much superior to those arising from the

* Observant practitioners are fully aware, that drawing much blood in severe cases of hooping-cough has not the beneficial effects in relieving the inflammatory symptoms that it has in most other cases of active inflammation; and it is certain, that the physician who trusts chiefly to blood-letting in the most acute cases of this disease, will commonly lose his patients. The most efficient remedy here is the pill of calomel and tartarized antimony, or James's powder, as above advised. I do not by these remarks intend wholly to prohibit the abstraction of blood, but only to caution the practitioner from trusting to it alone or chiefly. One reason why blood-letting disappoints expectation in severe cases of hooping-cough is, I believe, that it is often as much irritation as inflammation of the mucous membrane of the windpipe and bronchia that we have to deal with.

use of blisters, and it is far more eligible in infants and young children. At the same time, the vapour from a quantity of boiling water, into which two tea-spoonfuls of ether have been put, may be inhaled several times during the day, and the feet bathed in warm water on going to bed.

The *prussic acid* has lately been much extolled as an efficient remedy in this disease. I have at present (June 1834,) no experience of its effects here, and certainly am much rather disposed to be satisfied with the skilful employment of emetics, calomel and antimony, blood-letting and the tartar emetic ointment; but the opinion of Dr. Anthony Thomson, (a person evidently of much consideration and judgment, and one who does not seem desirous to force himself into notice, by vaunting a particular remedy as possessing wonderful and unheard of properties,*)—his opinion is so strong, that I shall lay it before my readers in his own words, leaving time and observation fully to determine how far it is correct. He says, *Elements of Materia Medica, vol.* i. *p.* 435:

"In hooping-cough, I regard it as the sheet anchor of the practitioner; and do not think I am stretching my praise of it too far, in affirming that few cases of this disease would prove fatal, were the hydrocyanic acid early resorted to, and judiciously administered. After emptying the stomach with an emetic, and purging briskly, the use of the acid should be begun, and the prescription never altered, except to increase the dose of the acid. When thus treated, the disease seldom continues more than a month or five weeks. It is necessary to confine the little patients to a graduated temperature, and to keep them altogether upon a milk and vegetable diet."

The first or inflammatory stage possibly includes about the first two or three weeks, during which time anti-inflammatory measures, as we have already stated, should alone be employed. But in the second stage, when the disease begins to drop the symptoms of inflammation, and to assume more of a spasmodic character, antispasmodics, tonics, and alteratives, ought to be tried, and will often succeed in curing the complaint, which, without them, would often run on to a great length, and by its continuance induce so much debility and disorder, both in the lungs and whole constitution, as to pave the way for consumption, or some other fatal malady. The flowers of zinc, extract of hemlock, or night-shade, wine of meadow-saffron, and bark, are, in my opinion, the best internal remedies at this period, and stimulating embrocations to the spine, or the tartar emetic ointment to the chest, the most efficacious external applications.

In the second stage, from half a grain to a grain of the flowers of zinc, made into a pill with extract of gentian, may

* He is the author of the well known and most ably written work—*the London Dispensatory.*

be given to children two or three times a day. Or a grain of extract of hemlock may be administered in the same way, the dose being gradually increased to two, three, or four grains at a dose, according to the age of the child and the severity of the disease.

But the extract of night-shade has been praised beyond any other remedy in the second stage of hooping-cough, by the skilful and discerning Dr. Golis, physician to the hospital for sick children at Vienna. He says, that during a period of eighteen years he has found it to be a most valuable remedy in this complaint. It is, no doubt, sometimes a powerful sedative and antispasmodic, and much worthy of attention in obstinate cases of this species of cough. The experienced French physician Laennec, considered it very useful here, and superior to all other narcotics. Children of six years old may take it according to the following prescription, the dose of the extract being either diminished or increased for patients of a more tender or advanced age.

> Take of good extract of night-shade, six or eight grains; acetated liquor of ammonia, one ounce; spearmint or simple water, two ounces and a half; simple syrup, half an ounce.—Mix, Dose, a table-spoonful three times a day.

The wine or tincture of meadow-saffron has been well spoken of by some physicians on the continent, and from its well known power of relieving pain and spasm, I am disposed to think highly of it as an auxiliary remedy for hooping-cough. Four or six drops may be given, in any agreeable vehicle, to a child of eight years old, three times a day. It may be given during the inflammatory stage, as an assistant to blood-letting, or calomel and opium, or in the second stage, to aid the operation of any other antispasmodic employed.

Dr. Cullen was wont to rely almost exclusively on bark, in the second stage of the complaint. As children are with great difficulty prevailed upon to take a moderate quantity of this medicine, in powder, the sulphate of quinine (see page 77) will be found an excellent mode of administering it. From half a grain to three or four grains of the sulphate, made into a pill with extract of gentian, may be given twice or thrice a day. Quinine is particularly indicated when the paroxysms assume a periodical type.

Some practitioners have found the extract of common daffodil (*narcissus pseudo narcissus*) of unusual service in many cases. From half a grain to two grains, may be given every two, four, or six hours.

Beside the above remedies, both the acetate of lead and arsenic, have been employed with success, and recommended by

respectable practitioners for the cure of hooping-cough. They are very active remedies, and ought not to be used till other means have failed; when this is the case, the acetate of lead is the safer medicine, and may be found of great value.

Take of acetate of lead (plumbi super-acetas) three grains; opium, one grain; extract of hemlock, ten grains.—Mix, and divide into eight pills. Dose for a child of ten years old, one pill three times a day.

At the same time that we resort to one of the above internal medicines, some stimulating ointment or embrocation should be used externally, and I know none superior to the tartar emetic ointment or lotion. The ointment has already been described, and the lotion is as follows:

Take of tartarized antimony, one drachm. Dissolve it in two ounces of water, and add, tincture of Spanish flies, one ounce. —Mix for a lotion, a little of which is to be rubbed over the pit of the stomach three or four times a day, till relief is obtained.

This was once a famous *nostrum*, called Struve's lotion for the hooping-cough, and is often very efficacious. Roche's embrocation is made by mixing an ounce of oil of amber with two ounces of olive oil, which is scented strongly with oil of cloves; a tea-spoonful or two may be rubbed on the chest, or down the spine, frequently through the day, but it is not so effectual as the above lotion. No. 41, page 106, is an excellent stimulating embrocation for the purpose, and superior to Roche's.

Mr Ward, of Manchester, speaks of several violent cases of this cough, cured by opiate friction alone, after many other things had failed. The liniment, No. 39, page 105, may be employed.

In the latter periods, the diet should be nourishing, but mild and easy of digestion; and where it is practicable, change of air, especially to the sea coast, is very advisable in severe cases. Cold bathing is sometimes of immediate and permanent advantage.

From what has above been said, it will be perceived, that the best plan which can be adopted for the first three weeks, is, to administer an occasional emetic in the morning, with the febrifuge mixture advised during the day, the tartar emetic ointment being rubbed on the chest, and the vapour of warm water inhaled frequently. This will conduct the generality of children very safely through the first stage. And in the advanced periods of the complaint, a little of the flowers of zinc, wine of meadow-saffron, or sulphate of quinine internally, with Struve's stimulating lotion, or the embrocation, No. 41, page 106, employed externally, will very rarely fail to remove all complaint.

It not unfrequently happens, that children, after having lost the hoop for many weeks, will still manifest symptoms of great indisposition, with a loss of appetite, flesh, activity, and spirits. In such a case, twenty grains of ipecacuanha powder, and a drachm of extract of hemlock may be mixed together, and divided into twenty pills; one or two of which should be taken thrice a day, the bowels being kept gently open by some simple laxative, as No. 100, or 101, and the chest and spine rubbed daily with the embrocation, No. 45, page 106. These pills are of excellent use in almost all coughs.

OF HYPOCHONDRIASIS, OR LOW SPIRITS.

Hypochondriasis, low spirits, or vapours, is a certain state of the mind accompanied with indigestion, wherein the greatest evils are apprehended upon the slightest grounds, and the worst consequences imagined from any unusual feeling even of the slightest kind; and in respect to such apprehensions and feelings, there is always the most obstinate belief and persuasion.

Ancient medical writers supposed this disease to be confined to those particular regions of the abdomen technically called *hypochondria*, which are situated on the right and left side of that cavity, whence comes the name of hypochondriasis.

The *common corporeal symptoms* are, a troublesome flatulency in the stomach or bowels, acrid eructations, costiveness, a copious discharge of pale urine, spasmodic pains in the head and other parts of the body, giddiness, dimness of sight, palpitations, general sleeplessness, and often an utter inability of fixing the attention upon any subject of importance, or engaging in any thing that demands vigour or courage. The mental feelings, and peculiar train of ideas that haunt the imagination and overwhelm the judgment, exhibit an infinite diversity: sometimes the hypochondriac is tormented with a visionary or exaggerated sense of pains, or some concealed disease; a whimsical dislike of particular persons, places, or things; groundless apprehensions of personal danger or poverty; a general listlessness and disgust; or an irksomeness and weariness of life: in other instances, the disease is strikingly accompanied with peevishness, and general malevolence; they are soon tired with all things; discontented; disquieted; upon every light occasion, or no occasion, object; often tempted to make away with themselves; they cannot die, they will nót live; they complain, weep, lament, and think they lead a most miserable life: never was any one so bad.

The whims that are sometimes seriously entertained under

this complaint are of the most ludicrous description. A foreign writer makes mention of a baker of Ferrara who thought himself a lump of butter, and durst not sit in the sun or come near the fire, for fear of being melted. The wisest and best of mankind are as open to this affliction as the weakest. The excellent Pascal was at one time so hallucinated with hypochondriacism, as to believe that he was always on the verge of an abyss, into which he was in danger of falling; and under the influence of this terror, he would never sit down till a chair was placed on that side of him on which he thought he saw it, and thus proved the floor to be substantial. Rousseau was a perfect hypochondriac, and morally of the worst description.

The *chief cause* may be a strong constitutional predisposition, or the disease may be the consequence of a sedentary life of any kind, especially severe study protracted to a late hour in the night, and rarely relieved by social intercourse or exercise; a debauched and dissolute habit; great excesses in eating and drinking; the immoderate use of mercury; violent purgatives; the suppression of some habitual discharge, or long continued eruption. Our excellent poet, Cowper, who was deeply depressed by hypochondriacism for the greater part of his life, was thus afflicted after having had a cutaneous eruption repelled, to which he had been for some time subject.

Congestion, or some peculiar affection (by whatever produced) of one or more of the important organs within the abdomen, is a frequent cause. M. Pinel, a French writer on this disease of considerable reputation, regards a displacement of the transverse arch of the colon* as a powerful and ready cause of hypochondriasis; and M. Esquirol, another distinguished French physician of the present day, has found it as frequently as M. Pinel. This displacement sometimes consists in an oblique, and sometimes in a perpendicular direction of the intestine; but no disease of the organization has been found in any instance, and hence the change of place seems to proceed from relaxation and debility alone.

Treatment. The principal objects of treatment are, to remove the indigestion, to strengthen the body, and to enliven the spirits; and one of the best plans with which I am acquainted, for the fulfilment of these intentions, is, constant exercise and change of place, with a warm bath about thrice a week, early hours, regular meals, and pleasant conversation; the bowels being at the same time carefully regulated by the occasional use of a mild pill, and the stomach strengthened by some appropriate tonic medicine. The exercise should be very considerable

* The *colon* is one of the large intestines, next above the *rectum*, or last gut.

daily, and of all common modes, that in an open carriage, or on horseback, is the best, which should be combined, if possible, with constant change of air and scene. Indeed, travelling alone is a most powerful remedy in this disease, since it is often one of the most efficient means in removing indigestion, of strengthening the body, and exhilarating the spirits; and where the patient's circumstances will permit, it ought invariably to be one of the first measures resorted to, as it will undoubtedly be found one of the best. If displacement of the colon is a frequent cause of this malady, as I believe, adopting the views of Pinel and Esquirol, we have therein strong reasons for recommending travelling to the hypochondriac. At the same time, a warm bath at ninety-five or ninety-six degrees should be taken every other morning; the patient accustoming himself to early rising, and regular meals of nourishing and easily digested food. The bowels are almost always torpid in hypochondriacs, and will, therefore, require constant attention in selecting articles of diet which are of an opening quality, with the occasional employment of a warm pill. The aperient pills, No. 97, 100, or 101, page 120, are very suitable, one or two of which may be taken thrice a week. The bitter and metallic tonics advised under *Indigestion*, are generally prescribed in this complaint, and all of them are sometimes of great service; but I question whether any other article is here of such eminent utility, as a tonic, as ipecacuanha. It at once invigorates the stomach, relaxes the skin, and favors the natural action of the bowels. It may be taken according to the following formula:

> Take of best ipecacuanha, in powder, twenty grains; Castile soap, one drachm; extract of chamomile, one drachm.—Mix, and divide into forty pills. Take two, twice or thrice a day.

Regular daily friction over the limbs and bowels, with the flesh brush, is very advisable; and the general diet and regimen should be governed by the principles laid down for treating indigestion.

The sulphate of quinine, in doses of a grain or two, two or three times a day, may prove a useful tonic medicine in some instances. It is certainly the best way in which bark can be administered.

The waters of Tunbridge, and other chalybeate springs are proper; and the Harrowgate water has appeared to have been of eminent service in many cases.

Some physicians have recommended a free use of mercury, but it is a measure which, in my opinion, should never be resorted to in hypochondriasis, without a strict investigation into the causes which may have given rise to it in the particular instance to be treated, and a careful consideration of the present

and past state of the health and strength; for should the patient's habit be weakly, and the complaint have been brought on by sedentary occupation, violent purgatives, or other direct causes of debility, the active employment of mercurials will rarely fail to augment both the local and general relaxation, and to give strength to the disease. If, however, the patient possesses a good share of general vigour, and the low spirits seem to have arisen from a very confined state of the bowels, or other source of internal congestion, or from a repelled eruption, the cautious use of mercurial alteratives may sometimes prove of the greatest benefit. In such cases, the pill, No. 99, page 120, may be given once or twice a day, in conjunction with the general plan above noticed.

For local pain in the head or stomach, the most efficacious means are blisters, applied to the neighbourhood of the part affected, or friction with an anodyne liniment, as No. 39, page 105; or five or ten grains of extract of hemlock, with two grains of true James's powder, may be administered as occasion requires, or a few drops of Battley's opiate drops.

In regard to the *moral management*, assiduous kindness and consoling conversation produce a deeper effect than they seem to do. The patient should rarely be opposed in the expression of his sentiments, and never with ridicule. A very grand object is to gain the patient's confidence, and in order to effect this, we must humour his foibles, and seem to fall in with his views. When he is dwelling upon some imaginary disease, it must be prescribed for, and should his anxiety pass in succession from one complaint to another, they ought all to be prescribed for in their turn, for there is seldom any other way of removing the groundless fears associated with hypochondriacism. To show the effect of judicious moral management in the present disorder, I have transcribed the following case, which is to be found in one of Dr. Cox's publications:

"Mr. ——, aged forty, of a spare and melancholic temperament, remarkable for general and almost universal acquired knowledge, and always possessing singular equanimity, had injured his health by too close an attention to extensive mercantile concerns. At length he was observed to be very attentive to every feeling, of which he made minute descriptions to his family: this increasing, he became a prey to empiricism, read several ridiculous popular pamphlets, and was soon worked up to a belief that his body was the common receptacle of diseases: pills, potions, powders, unctions, lotions, and mercurial girdles, were employed and dismissed in succession. The metallic tractors for a time amused him, till it was proved to the patient, and to his friends who witnessed the experiments, that these expensive baubles possessed no more properties than a rusty nail. All the fears of the patient became at length concentrated in one, from the contemplation of, and conversation on which, no arguments could divert him: he believed all his sufferings arose from repelled

itch; a formal consultation of medical men was, therefore, determined on, who having previously agreed on the propriety of humouring the patient, were unanimously of opinion that his conjecture was just. A medical plan was laid down; some stimulating applications to different parts of the body occasioned crops of eruptions from time to time, which were washed with some simple preparation. This farce continued a few weeks, and the patient at length was perfectly restored to health and reason."

OF HYSTERICS.

Hysterics consist in a convulsive struggling, alternately remitting and increasing, with a sense of a suffocating ball in the throat, drowsiness, copious discharge of pale urine, rumbling in the bowels, and fickleness of temper.

The hysteric fit often takes place without any previous warning, though generally there are some precursive signs, as yawning, stretching, dejection of spirits, anxiety of mind, sickness at the stomach, palpitation of the heart, and sudden bursts of tears, without any assignable cause. The paroxysm soon succeeds, with a coldness and shivering over the whole body, and frequently with an acute pain on the left side, and a sense of distention, giving the idea of a ball or globe rolling about in the abdomen, and gradually advancing upwards till it gets into the stomach; thence removing to the throat, it occasions the sensation of an extraneous body lodged there, which is called *globus hystericus*. The disease having arrived at its height, the patient appears threatened with suffocation, she becomes faint, and is affected with stupor and insensibility; whilst, at the same time, the trunk of the body is twisted backward and forward, the limbs are variously agitated, and the fists are closed so firmly, that it is difficult, if not impossible, to open the fingers: wild and irregular actions follow, in alternate fits of laughter, crying, and screaming, incoherent expressions are uttered, and sometimes a most obstinate and distressing fit of hiccough takes place. The spasms at length abating, a quantity of wind is evacuated upwards, with frequent sighing and sobbing; and the patient, after appearing for some time quite spent, recovers the exercise of sense and motion, without any other feeling than a general soreness, and a pain in the head. It is rarely that an hysteric fit has become dangerous; though it has, in a few instances, terminated in epilepsy or insanity.

Hysteric affections occur much more frequently in the unmarried than in the married, and most commonly between the age of puberty and that of thirty-five years; and they make their attack oftener about the period of menstruation than at any other time. Women of a delicate habit, and whose nervous system is extremely sensible, are those most subject to hysterics;

and the habit which predisposes to their attacks is acquired by inactivity and a sedentary life, grief, anxiety of mind, late hours, dissipation, a suppression or obstruction of the menstrual flux, excessive evacuations, and the constant use of an innutritious diet. They are readily excited in those who are subject to them by passions of the mind, and by every considerable emotion, especially when the effect of surprise; hence sudden joy, grief, or fear, are very apt to occasion them. They have also been known to arise from irritation and sympathy.

Constipation, and severe disorder of the bowels, will sometimes give rise to very painful hysteric fits.

This complaint is easily *distinguished* from hypochondriasis by its convulsive struggling fits making their onset suddenly and violently; by its being accompanied with the sensation of a ball rising upwards in the throat; by the copious discharge of pale urine; and by its occurring at an early period of life. Hypochondriasis, on the contrary, is gradual in its accession, and tedious in its progress; it comes on about the middle age; the dejection of spirits is constant and very great; and there is no convulsive paroxysm.

Hysterics are sufficiently *distinguished* from epilepsy by the greater degree of insensibility during the paroxysms of the latter, by the profound sleep which follows it, and by the absence of laughing, crying, moaning, and other symptoms above detailed.

Treatment. During the fit, it will be the safest practice to rouse the patient by applying burnt feathers, assafœtida, or smelling salts, to the nose; by rubbing the temples with ether, and by putting the feet into warm water. In obstinate cases, cold water may be dashed over the limbs, and the laxative clyster, No. 8, page 97, should be exhibited. A clyster of cold water alone has been effectual in putting an end to the fit.

If the patient be young and plethoric, and the attack of a recent nature, ten or twelve ounces of blood may be taken from the arm, and in robust and vigorous habits the bleeding may be carried to the extent of sixteen or eighteen ounces; but in weak and delicate constitutions, or where the disease has been of long standing, the abstraction of blood would be highly improper.

In the intervals of the paroxysms, the object is to obviate costiveness and indigestion, and to strengthen the whole constitution; every remote or exciting cause being sedulously avoided. The use of mild aperients and tonics, with active exercise in the open air, regular meals of nourishing food, early rising, and cheerful company, are the principal means of invigorating the body and mind, and thus effecting a radical cure of hysterics.

The warm aperient pill, No. 100, or 101, page 120, will be proper for occasional use; and the ammoniate of copper, sulphate or flowers of zinc, sulphate or carbonate of iron, guaiacum, quassia, and bark, are the most celebrated and valuable tonics. The bark may be taken as advised in No. 115, page 124; the preparations of copper and zinc may be administered as recommended under EPILEPSY, and the sulphate or carbonate of iron according to the forms given under *Indigestion*. The ammoniated tincture of guaiacum, in doses of thirty drops, twice or thrice a day, in milk and water, is sometimes an excellent medicine; it may be given in conjunction with the tincture of muriate of iron, if it does not succeed alone.

Dr. Paris writes in favor of the virtues of quassia. "It has been observed," says he, "that in hysterical debility, to which the female sex is so prone, the quassia affords more vigour and relief to the system, than the Peruvian bark, especially when combined with a small proportion of sulphate of zinc."

Take of sulphate of zinc, two or three grains; infusion of quassia, four ounces; tincture of columba, half an ounce —Mix, and take two table-spoonfuls three times a day.

The preparation of bark called the sulphate of quinine is sometimes a useful remedy. In hysterics returning periodically, it has not unfrequently effected a cure after other tonics had failed. The cold bath is occasionally useful; and mineral waters may be drank with the prospect of benefit.

When hysteric affections arise from a suppression or obstruction of the menses, these evacuations must be fully restored by adopting the means recommended under those particular heads.

Anodynes and antispasmodics, as opium, musk, castor, and valerian, are often had recourse to in this complaint, but are, in my opinion, of very doubtful advantage. Dr. Buchan remarks, that all the extraordinary cures he ever witnessed in hysteric cases, were performed by means of tonic and corroborating medicines, which entirely agrees with my own experience. Mugwort has been useful: see *Epilepsy*, page 391.

The tincture of meadow-saffron has completely succeeded in curing an obstinate case of hysterics; and from its acknowledged power of allaying pain and nervous irritation, I am disposed to consider it a valuable remedy in many instances of this disorder. Used as a palliative to put an end to the actual fit, a tea-spoonful may be given, in water, and repeated to the second or third time, if necessary: and when employed, in the intervals, with the view of obtaining a radical cure, twenty or thirty drops may be given twice a day, in any agreeable vehicle. In its power of affording present relief, it seems to me superior to

assafœtida, or any of the antispasmodics in common use, and safer than opium. It should not be continued for any length of time; in general, not longer than three or four weeks at one time.

Regular exercise on horseback, with variety of scene, and early rising, are particularly desirable. The diet should be nourishing, and such as is recommended in indigestion.

Cramp, and local pain, may be relieved by the means pointed out under hypochondriacism.

The late Dr. Good has correctly observed, that where the disease occurs in the bloom of life, and there is reason to apprehend the ordinary orgasm of this age to be in excess, the surest remedy is a happy marriage.

OF INCONTINENCE OF URINE.

Incontinence of urine is a frequent or perpetual discharge of that fluid, with difficulty of retaining it.

This disease usually proceeds from relaxation or palsy of the sphincter muscle of the bladder, induced by debility, the abuse of spirituous liquors, excess in venery, &c.; or it arises from a peculiar acrimony in the fluid itself; from a diseased state of the organ; injury done to the parts, either by accident, by the process of ulceration, or by the performance of the operation of lithotomy; irritation produced by stones in the bladder; or the pressure of the womb in the state of pregnancy.

TREATMENT. As the complaint commonly proceeds from debility, tonics and stimulants are generally found to be the most efficacious remedies; such as bark, steel, turpentine, tincture of Spanish-fly, capivi balsam, lime-water, and bear's whortle-berry. The following prescriptions are sometimes very serviceable, and should one fail, the patient can try another.

Take of sulphate of zinc, one drachm; common turpentine, three drachms; rhubarb, in powder, half a drachm.—Mix, and make into sixty pills; one to be taken thrice a day.

Take of tincture of Spanish-fly, fifteen, twenty, or thirty drops; decoction of bear's whortle-berry, four table-spoonfuls.—Mix for a draught, to be taken three times a day.

Take of balsam of capivi, half an ounce; frankincense, in powder, two drachms; mucilage of gum arabic, an ounce and a half; simple syrup, half an ounce; cinnamon water, five ounces.—Mix, and take three table-spoonfuls thrice a day.

Should there be a discharge of white mucous fluid from the bladder, Mr. Cline recommended two drachms of common turpentine, and one drachm of best rhubarb powder, to be mixed

together, and made into thirty-six pills, two or three of which are to be taken three times a day, with a wine-glassful of decoction of bear's whortle-berry. Should this fail, I advise a trial of the *pareira brava*, or the buchu leaves.

At the same time that one of the above remedies are taken internally, cold water should be freely applied locally; and an occasional blister to the *sacrum*, or broad bone at the bottom of the spine, is frequently of material service. Blisters applied to the *sacrum* of boys who are apt to wet their beds, have often completely cured them of this incontinence without the use of any other remedy.

Pressure is also of great service in many instances. A case of nine years' standing was cured in three days by passing a bougie through the whole course of the urethra, and binding it tightly in that direction by means of adhesive plaster. In obstinate cases electricity is worthy of a trial.

If these means are ineffectual, it will be advisable for the male patient to wear a *jugum*, and the female a *pessary*, which will mechanically prevent the urine being evacuated involuntarily. They are to be bought of any surgeons' instrument maker. Or males may wear a small bag of oiled-silk, with a small piece of sponge placed in it as an absorbent; and females a larger piece of soft sponge loosely attached externally.

When this complaint arises from the irritation of stones in the bladder, small doses of opium, taken in the decoction of whortle-berry,—diluting mucilaginous drink, as solutions of gum arabic, linseed, and isinglass,—lime-water, and other alkalies, will be the most proper and useful remedies.

In pregnant women, the complaint may be relieved by the patient's confining herself as much as possible to an horizontal posture.*

Incontinence of urine is now and then met with from laceration of the parts during a difficult labour, when the constitution is to be invigorated by tonics, and the usual surgical means should be employed, under the direction of a surgeon, for procuring an union of the divided parts. Even in this distressing case, much may often be done by careful attention, and perseverance on the part of the medical attendant. The bear's whortle-berry, buchu leaves, and the balsam of capivi, seem particularly worthy of regard in this variety of the complaint.

* Some further remarks and directions may be seen in my *Treatise on the Diseases of Females.*

OF INDIGESTION, OR DYSPEPSIA.

Indigestion is a disorder of the stomach and first intestines, the most striking symptoms of which are, difficult digestion of the food, sense of oppression or uneasiness after eating, capricious and deficient appetite, and costiveness. It is essentially a debility of the stomach and smaller bowels, though the weakness, and disorder of function, frequently extends to the liver, pancreas, and other organs associated in the perfect digestion of the food.

A sense of distention or oppression after eating; acrid eructations; constipation and uneasiness of the bowels, sometimes looseness; furred tongue; impaired appetite and strength; flatulency; discoloured stools, they being either green, black, or much too light; nausea; head-ache; sometimes bilious vomiting; palpitation of the heart; pain in the pit of the stomach, and towards the right side; sallowness of complexion; and depression of spirits, are the chief *symptoms* of this complaint. The whole of these *symptoms*, however, are not always present in indigestion, but under whatever form, and from whatever cause the disease occurs, there is a considerable degree of general languor and debility: exercise, or exertion of any kind, soon fatigues; the pulse is weak; the sleep disturbed; the limbs are cold, or rendered so on slight occasions; and a sense of distention and oppression, of acrid eructations, nausea, head-ache, constipation, pain in the pit of the stomach, and sallowness of complexion, are pretty constantly present.

Frequently there is a good deal of general feverish heat, flushing of the face, dryness in the mouth, weakness of the knees, and a dry scurfy state of the general surface of the body.

These symptoms are now very commonly called *bilious*, and when they assume a severe and obstinate character, are often referred to disease of the liver, and denominated a *liver complaint;* but, generally speaking, these are very improper names for the disorder, for though the biliary secretion is here often faulty in quality, or deficient in quantity, it is, for the most part, a secondary and sympathetic affection, dependent upon the debility and disorder of the stomach and bowels, which are the primary and chief seat of the malady. Besides, indigestion may continue for a great length of time, and be of a very severe description, without any disorganization existing in the liver, or any other of the digestive organs, and since an active use of mercury is, at the present time, so commonly considered as absolutely necessary to the recovery of the patient, indeed, as "the fit and only remedy," it is of considerable moment that

these remarks should claim close attention from the reader; for such an employment of mercurial preparations in dyspepsia, seldom fails to be attended with great and permanent injury. The real fact is, that indigestion is a frequent disorder, liver complaints comparatively rare.

Every thing which weakens the system in general, or the stomach in particular, may be a *cause;* such are, an excessive indulgence in warm relaxing fluids, as tea, coffee, and soups; an equal indulgence in stimulant and acrid materials, as ardent spirits, tobacco, acids, and snuff; a daily habit of distending the stomach by hard eating and drinking; rigid abstemiousness, and very protracted periods of fasting; imperfect mastication, and eating too fast; an indolent, or sedentary life; habitual exhaustion from intense study. Grief and anxiety are frequent and powerful causes.

The foundation of this complaint is often laid in infancy and youth by the excessive employment of calomel, a practice which is totally uncalled for, but which has been very much *in fashion* of late years. And where the patient has fortunately escaped its frequent use in very early life, it has often proved a direct cause of indigestion at a later period. Calomel is a strong and peculiar stimulant to the digestive organs, and when frequently repeated in large doses, it impairs their natural energies, and exerts a very depressing and distressing effect upon the whole nervous system.

But, perhaps, the *principal cause* of the very great prevalence of indigestion which has been witnessed in this kingdom within the last thirty years, is our present sedentary mode of living. The general mode of living in England now differs greatly from what was practised by our forefathers; indeed, there is a striking difference within the last fifty years.* Our hours of rest and rising are later; the floors of our houses universally are covered with thick warm carpeting, and the windows and doors are made air tight; cities and large towns have multiplied, and surprisingly increased in population, while the country has been comparatively forsaken; and, as a necessary consequence of this, sedentary occupations in crowded places have augmented beyond all former example, to the neglect of those engagements which carry men abroad into the fields and open country, and impose a necessity for active and continued bodily exertion. The healthful employments of the farmer and country gentleman, have been, in a great measure, relinquished for the more

* In the time of Queen Elizabeth, the nobility and gentry were accustomed to dine at eleven, to sup between five and six, and go to rest at ten; and it may be added, a maid of honour in the Queen's court, breakfasted upon beef, and drank ale after it; while the sportsman, the mechanic, and even the day-labourer, now breakfast on tea.

lucrative pursuits of trade and commerce, which have necessarily brought men in large bodies into a narrow space, in which they breathe a deteriorated and unwholesome atmosphere, and by which they are deprived of the means of adhering to the regular hours and sober habits of a country life, whilst they are exposed to much greater care and anxiety. Even country families of sufficient fortune consider it now absolutely necessary to have a town house, where it is common for them to reside for a great part of the year; and thus they sacrifice their health and strength to their desire of mixing with the fashionable world, and indulging in the vanities of novelty and splendour. By these means, a great degree of general chronic debility has been silently, but certainly, engendered in the constitution, in which the stomach and intestines sympathize, and of which they largely partake.

The *immediate cause* seems to be a debility of the nervous influence and muscular fibres of the stomach and bowels.

TREATMENT. The indications of treatment are, first, to relinquish whatever cause has laid a foundation for the complaint; next to palliate the symptoms which aggravate and continue the disease; and then to restore the debilitated organs, and whole system, to their proper tone.

The first and most important step to be taken in the cure of indigestion is, to remove such habits and pursuits as may have tended to give rise to the disease, and continue to aggravate it: until this has been effected, remedies will be found of little avail. If the patient leads a fashionable life, it will be necessary for him to forsake the haunts and habits of dissipation; to leave the crowded city; to shun luxurious tables, indolence, and late hours; and to retrace the footsteps by which he had deviated from simple nature, and to court the country, pure air, moderate exercise, early rising, simple diet, the society of a few select friends, and pleasing occupations. The man of severe study must in a great measure lay aside his books; the fagging tradesman or merchant will find it indispensably necessary to enjoy relaxation; the hard drinker must greatly diminish his potations, especially of ardent spirits; and all dyspeptics must take exercise in the open air freely, rise early, seek cheerful conversation, and carefully observe a moderate and correct diet.

Smoking and chewing tobacco, and even constant snuffing, have often produced indigestion, and when they appear to be causes, the practice must be less frequently resorted to, or altogether abandoned. "I have found," says Dr. Cullen, of Edinburgh, "all the symptoms of dyspepsia produced by snuffing, and particularly pains in the stomach occurring every day.

The dependence of these upon the use of snuff became very evident from hence, that upon an accidental interruption of snuffing for some days, these pains did not occur; but upon a return to snuffing the pains also recurred; and this alternation of pains of the stomach, and of snuffing, having occurred again, the snuff was entirely laid aside, and the pains did not occur for many months afterwards, nor, so far as I know, for the rest of life." In another place, he relates a singular case of a lady to whom this practice became injurious. This lady had been for more than twenty years accustomed to take snuff, and that at every time of the day; but she came at length to observe, that snuffing a good deal before dinner took away her appetite; and that even a single pinch, taken at any time in the morning, destroyed almost entirely her relish for that meal. When, however, she abstained entirely from snuff before dinner, her appetite continued as usual; and after dinner, for the rest of the day, she took snuff pretty freely without any inconvenience.

In endeavouring to palliate urgent symptoms, the attention will be chiefly called to obviate constipation, flatulency, morbid acidity, and an overloaded state of the stomach. For the purpose of relieving the stomach, the medical treatment may be commenced by taking fifteen grains of ipecacuanha powder in water; but the necessity for an emetic is rarely apparent, except in the commencement of the disease, or when the patient has not previously been under the direction of a medical practitioner.

There are few points of greater importance than the proper regulation of the bowels. They ought to be comfortably exonerated once a day, by means of attention to diet, and the occasional use of some mild aperient medicine. *Purging should be avoided.* Generally speaking, aperient medicine, in the form of pill, is much to be preferred in dyspepsia; and the following composition is one of the best I am acquainted with.

> Take of compound extract of colocynth, one drachm; compound rhubarb pill, half a drachm; ipecacuanha, in powder, fifteen grains; oil of carraways, ten drops; Castile soap, twenty grains. Mix, and divide into twenty-four pills; one or two to be taken every other night, or as occasion may require.

In taking aperients, the dyspeptic should never forget, that the proper object in his case, is to relieve the bowels without irritating them, and, therefore, small doses of such medicines are invariably the most useful. Refer to the article on COSTIVENESS. In many cases of indigestion the bowels are very irritable, and the operation of even a slight purgative is inexpressibly distressing; in such examples, a couple of grains of the extract of henbane may be advantageously added to the

aperient pill used, and sometimes also half a grain or a grain of quinine. Where the bowels are so unusually weak and irritable, the union of a tonic with the aperient is worthy of much notice.

To palliate flatulency, the means recommended under that head may be resorted to. A tea-spoonful or two of tincture of ginger, or cardamoms, in a glass of peppermint or cinnamon water, will be found a useful medicine for this purpose; and should acidity prevail at the same time, ten grains of magnesia, or ten drops of water of ammonia, may be added to each draught. The mineral acids are sometimes very efficacious correctors of the latter symptom. But of all the medicines used for the correction of acidity in the stomach, I think there are none so suitable and efficacious, in the present complaint, as the carbonate of ammonia, and the alkaline solution.—See pages 19 and 2.

For nausea and vomiting, one of the most effectual remedies is a draught of soda water, drank in a state of effervescence, which may be repeated two or three times a day. Should this fail to allay the sickness, a blister may be applied over the pit of the stomach.

The third, and principal indication of treatment, is to restore the stomach, and the system at large, to their proper tone and strength, which is to be accomplished by the use of certain vegetable bitters and astringents, mineral acids, and preparations of iron, mercury, and other metals, united with a suitable diet and regimen. The best brown ipecacuanha powder is a valuable astringent tonic, and is a remedy of great value in the present complaint. It may be given either alone, made into pills with a little soap, or in combination with iron, extract of chamomile, or gentian, or any other bitter extract. The celebrated French physician, Daubenton, recommended it for the indigestion of elderly persons especially, but it is, perhaps, equally efficacious in younger patients; and it possesses a great advantage over many other remedies, inasmuch as it is applicable to the early as well as the later stages of the complaint, and may often be administered with evident benefit when there is a good deal of pain, and slow inflammatory action going on, in the region of the stomach; a state in which the metallic tonics, and even the vegetable bitters, are frequently altogether inadmissible. The following are excellent forms of exhibiting it:

Take of ipecacuanha, in powder, thirty grains; carbonate of iron, three drachms; extract of chamomile, one drachm.—Mix, and divide into sixty pills; two to be taken twice or thrice a day.

Or,

Take of ipecacuanha, in powder, thirty grains; white oxyde of bis-

muth, two drachms; extract of gentian, one drachm.—Mix, and divide into sixty pills; two to be taken three or four times a day.

The most efficacious bitters are chamomile, bitter orange-peel, gentian, cascarilla, columba, wormwood, and Peruvian bark. All these possess a power of invigorating the digestive organs, and are particularly serviceable in the earlier stages of indigestion. But in the advanced periods they become less useful, and sometimes cannot be borne at all, since almost all of them possess a stimulant as well as a tonic quality, which does not agree with the irritable and inflamed state of the stomach at this period, denoted by pain in the region of that organ. The stimulant quality of the bitters in common use, nearly accords with the order in which they here stand, the chamomile possessing the least, and the bark the most of this power; so that in taking them for the relief and cure of the present disorder, we must make our selection accordingly. Generally speaking, the bark is inferior to the other bitters as a remedy in dyspepsia; yet, in the earlier periods of the disease, when it follows debilitated states of the constitution, and the stomach still retains considerable comparative vigour, a cold infusion of the bark is often the most beneficial of all bitters.

Columba is considered, by some superior writers, to be peculiarly calculated for dyspepsia in all its forms.

Some of the most approved modes of prescribing bitters are now subjoined.

Take of infusion of columba, an ounce and a half; tincture of columba, two drachms; tincture of ginger, ten or twenty drops.—Mix for a draught, to be taken three times a day.

Take of compound infusion of gentian, an ounce; alkaline solution, half a drachm; tincture of cascarilla, one drachm.—Mix for a draught, to be taken as above.

Take of infusion of cascarilla, three ounces and a half; alkaline solution, two drachms; compound tincture of cardamoms, two drachms.—Mix, and take two table-spoonfuls twice or thrice a day.

Take of decoction or infusion of bark, three ounces; compound infusion of gentian, an ounce; tincture of cascarilla, two drachms; solution of potash (liquor potassæ,) a drachm.—Mix, and take two table-spoonfuls twice a day.

The nitric, muriatic, and sulphuric acids, are appropriate tonics in indigestion. The first of these acids appears to me to be the most valuable; and it may often be given with great advantage in long standing cases, and where the patient complains of a great deal of pain at the pit of the stomach. In those severe examples which are so frequently but erroneously denominated *liver complaints*, it will be found sometimes of the

greatest service; the appetite and strength greatly increasing under its continued use, and the sallow hue of the complexion as quickly disappearing. Two drachms of it may be mixed with two ounces of water, and from a tea-spoonful to a tea-spoonful and a half of this mixture be taken three times a day, in water. From five to twenty drops of the muriatic acid, and from ten to forty drops of the diluted sulphuric acid, taken in some agreeable vehicle, twice or thrice a day, are the proper doses of these articles. The muriatic acid should always be administered in some bland fluid, as barley-water, gruel, &c. To prevent these acids from injuring the enamel of the teeth, they may be sucked through a quill, and the mouth should be carefully washed after each dose.

The mineral acids are efficacious correctors of morbid acidity, as well as being highly tonic, and, therefore, when acidity in the stomach is a troublesome symptom of the present disorder, they will often be found among the most eligible remedies.

In some instances of indigestion, however, the acids have but little effect, and appear too cold for the stomach, when the *alkaline solution of Brandish* (see page 2) is often particularly useful as a general tonic. It is in those cases in which coldness of the feet, chilliness of the general surface, languor, fluttering at the pit of the stomach, and morbid acidity, are the most prominent symptoms, that it displays its full powers. The dose is a tea-spoonful three times a day, in milk and water; or it may be taken in a bitter infusion, as directed in the preceding page.

Iron has always been considered of much service. The carbonate and sulphate of iron are the preparations most commonly resorted to, and they may be taken either alone, made into pills with mucilage of gum arabic, or combined with the foregoing bitter extracts, or with ipecacuanha.

Take of carbonate of iron, two drachms; myrrh, in powder, a scruple; extract of chamomile, one drachm; socotorine aloes, in powder, four or six grains.—Mix, and divide into forty pills; two or three to be taken twice a day.

Take of sulphate of iron, two drachms; extract of gentian, one drachm; socotorine aloes, in powder, four grains,—Mix, and divide into forty pills; two to be taken twice a day.

All the preparations of iron, however, are much less serviceable in the advanced periods than in the early stages. They are frequently found too heating, when they should be changed for the mineral acids, ipecacuanha, or the alkaline solution.

When pain in the stomach, of a chronic description, and apparently depending rather upon deficient energy of the organ,

than upon slow inflammation, is a troublesome symptom, the white oxyde of bismuth is very efficacious in removing it. Four grains of it may be made into a pill with a little extract of gentian, and given three times a day; the dose being gradually increased, if necessary, to six or eight grains.

The sulphate of zinc has been praised for its virtues as a tonic in this disorder, and being less heating than preparations of iron, may generally be taken when they are found too oppressive; but it must not be given beyond the extent of a grain at a dose.

Take of sulphate of zinc, fifteen grains; myrrh, in powder, fifteen grains; extract of chamomile, one drachm. Mix, and divide into thirty pills; one of which should be taken three times a day, and gradually increased to two.

Rhubarb is an excellent corrector of vitiated biliary secretion, and in small doses becomes a valuable stimulant and tonic to the stomach and bowels. A grain or two may be given two or three times a day, united with soap, or with ipecacuanha and soap. It is particularly indicated when the complexion is sallow, and the stools much discoloured, the use of mercury being at the same time, very limited, or altogether objectionable. In my practice, the rhubarb pills, No. 104, page 121, have proved of the most essential service to numerous persons afflicted with indigestion and bilious symptoms.

In many cases of protracted indigestion, tartarized antimony (emetic tartar) in small doses, is found of essential service, more especially when the long continuance of the complaint has induced a determination of blood to the head, or severe nervous irritation. See what is said at page 29.

Calomel, the blue pill, and other mercurial medicines, hold a distinguished place in the treatment of indigestion, and though by no means of so much consequence as the generality of medical men suppose, they are often of eminent utility. But if the complaint originates in, and is very nearly or altogether confined to the stomach, they are often of inferior value, and sometimes of no use whatever; while in those cases of the disease which centre principally in the bowels, or liver, they are generally of the greatest service, by promoting healthy secretion, and removing obstruction.* The only safe, and indeed the most efficient mode of administering them, is in small doses, once or twice a day; interposing occasionally a draught of some bitter infusion, as at page 473, or a tea-spoonful of the

* Mr. Abernethy, in his Lectures, has a useful remark in point. "If," says he, "the fault lie principally in the stomach, no blue pill will avail; if in the liver, bitters will be of little service."

alkaline solution in milk and water. The pill No. 99, may be given every night, or every other night, or one of the compound calomel pills, No. 98, page 119, may be taken nightly, or four or five times a week. At the same time, either of the first three draughts at page 473, taken twice a day, in the intervals, will frequently be found of essential advantage. Calomel should rarely be given alone in indigestion, and never in large doses. It ought not to be employed here as a purgative, but only as an alterative. Those cases are most benefited by mercurial medicines, in which the stools are remarkably discoloured and offensive, the appetite and strength not greatly impaired, and where there is a tendency to the formation of some obstinate or severe local disease. In all delicate constitutions, in which the appetite has habitually been somewhat capricious, and the general strength inconsiderable, mercury will be a doubtful remedy, and require great caution in its use. Whatever is the state of the disorder and constitution, the patient will do well to remember, that it is only by a skilful employment of small doses of this mineral that he can reasonably hope to derive great and lasting benefit. For general use, I know no mercurial combination equal to the pill No. 99, or 98, page 120.

Dr. Scott, of Russell Square, some time since recommended the external use of the mineral acids, as a valuable substitute for mercury, in protracted and severe cases of indigestion, and disease within the abdomen, and I am persuaded, that his practice is one worthy of much regard; but as these acid baths and ablutions, are more particularly applicable to cases of long standing, or where there is positive disease in the alimentary canal and liver, I shall defer any description of their properties and mode of preparation, till I come to treat of liver complaints.

It now and then happens, that both the bitter and metallic tonics are found to be of very little or no service in indigestion, the most sensible benefit arising from the free use of mild aperient medicine, and especially the saline aperients, as combinations of Epsom and Glauber's salt, &c. In such examples, the seat of the complaint is chiefly the internal surface of the bowels, and the liver, and the symptoms are, for the most part, those which are generally considered to point out a high degree of *bilious* disorder; such are sallowness of complexion, dryness of skin, shooting pains about the pit of the stomach, and either whitish or very dark coloured motions. Here the Cheltenham or Leamington waters are often of eminent utility; and when these cannot be resorted to, one of the following draughts may be substituted with much advantage.

Take of sulphate of magnesia, one or two drachms; sulphate of soda, one drachm; sulphate of iron, one grain.—Mix, and dissolve in half a pint of lukewarm water; to be taken every morning, or three or four times a week.

Or,

Take of Epsom salt, Glauber's salt, of each, a drachm, or a drachm and a half; carbonate of potash, half a drachm.—Mix, and dissolve in half a pint of water, with the chill taken off. To this, add a table-spoonful of lemon-juice, or thirty grains of tartaric acid, at the time of taking, and let it be repeated every morning.

This is a mild, pleasant, and very efficacious saline aperient, and is very nearly, if not quite, as effectual as the Cheltenham and Leamington waters. Or,

Take of compound decoction of aloes, an ounce; infusion of senna, one or two drachms; camphor mixture, half an ounce; aromatic spirit of ammonia, half a drachm.—Mix for a morning draught, to be taken four or five times a week.

Or,

Take of Epsom salt, two drachms; infusion of senna, six drachms; camphor mixture, six drachms; tincture of senna, one drachm. —Mix. To be taken as above.

This is similar to the common black draught.

Mr. Abernethy has remarked, that he has found the tinctures of rhubarb or senna to be sometimes more effectual in exciting healthy secretion from the bowels than any other aperient, which also accords with my experience. This seems to occur where there is a great deal of direct debility of the stomach, with coldness, and that general state of feeling which is relieved by some mild aromatic cordial. In such examples, about two drachms of each of these compound tinctures may be taken in a little water, and repeated three, four, or five times a week.

Having now, in a great measure, concluded what I have to say respecting the use of medicine in this malady, I ought to add, that, *in protracted cases*, whatever plan is adopted, much depends on the gentleness of the effect produced, the state induced in such instances being only to be removed by a slight effect regularly kept up for a considerable length of time. All powerful means, which are necessarily transitory, because they would soon destroy the patient if they were continued, fail to cure, and very often aggravate it. It is, therefore, of the greatest importance that the patient should remember, it is by the most gentle and frequently repeated impressions, that the organs are solicited once more to resume their healthy action in all protracted cases, more especially if considerable hardness of the pulse be present. Those cases of indigestion in which

there is permanent tenderness extending across the stomach quite to the left side, and those in which the skin, instead of being obstinately dry, is constantly moist, or apt to become so on every slight occasion, without any relief to the disease, (the pulse being hard,) are very generally obstinate, and will require particular attention to the preceding hints.

As an auxiliary remedy, the tepid bath merits attention. Some people suppose the warm bath to be relaxing, but when properly used in the present disorder, it generally proves very refreshing and strengthening. From ninety to ninety-five degrees is the best range of heat for dyspeptics, and the proper time for resorting to the bath is in the morning, between breakfast and dinner; the patient using it three or four times a week, and remaining in it from twenty to thirty minutes, according to his feelings, which ought to be comfortable on his coming out. A gentle walk or ride should follow it, when the weather permits.

Where the warm bath cannot be conveniently obtained, or it fails to be beneficial, tepid sponging should be substituted. The whole surface of the body should be sponged regularly every morning with tepid water, the patient rubbing himself dry after it with a coarse towel. This is a very refreshing and salutary practice, and one which Sir Astley Cooper considers to have very materially contributed to insure the excellent health which he has so long enjoyed. He uniformly resorts to it immediately on rising, and speaks of it as an effectual preventive against taking cold.

The internal use of the warm waters of Buxton and Bath are occasionally of great service. They relieve pain and uneasiness in the stomach, and often eminently promote digestion. The late Dr. Saunders of London, thought highly of tepid water as a remedy in this complaint, and questioned whether drinking the water at the celebrated springs of Buxton, would, upon trial, be found more efficacious in these complaints, than the regular use of the same quantity of any pure water heated to the same temperature. Those who wish to try it may take a small tumbler-ful after dinner and supper. For pain or uneasiness in the stomach, occurring after dinner, or any other solid meal, the addition of a tea-spoonful or a tea-spoonful and a half of strong tincture of ginger to the tepid water will prove of great benefit.

Whenever there is a great deal of tenderness on pressure, or pain at the pit of the stomach, which does not yield to the general treatment, the application of leeches to the affected part should not be neglected, as chronic inflammation of the stomach may be suspected. Four or six leeches may be ap-

plied once a week, for three or four weeks, if this symptom is not removed in a shorter time; but we must be careful not to induce debility by the use of this means. It will frequently be proper to apply a blister after the leeches have been removed.

A correct regimen is of the utmost consequence, and a strict and constant attention to it is absolutely necessary, in order to obtain a perfect cure. All sedentary occupations must be forsaken as much as possible, and if they can be entirely given up the prospect of complete relief will be far greater. Indeed, considerable and permanent advantage can only be obtained, in the majority of instances, by relinquishing in a very great measure all such engagements, and quitting the confined atmosphere and late hours of the crowded city, for the pure, dry, bracing air of the country, with its early rising, and active exercises.* It is the common neglect of such a regimen that makes indigestion so rarely and imperfectly cured; for where a high state of chronic debility, and nervous irritability, has been induced by long continued exposure to the depressing effects of confinement, and intense application to business, literary pursuits, or pleasure, no medicine, nor even diet can be employed with much effect as a substitute for country air, daily active exercises, cheerful company, and early rising. The patient should quit his bed by six o'clock in the morning in the summer, and by seven in the winter; and after partaking of a light breakfast, take exercise freely for two or three hours before dinner. After dinner, gentle exercise should be again taken for an hour or two. Of all exercises, those of walking and riding on horseback are the most beneficial, and, where the patient's means and strength allow, they should be used alternately: but when the strength is much reduced, horse exercise is almost invariably to be preferred.

The power of daily active exercise in the open air in curing indigestion, is very great, indeed such as would appear to the majority of persons almost incredible, and, therefore, it cannot be too much insisted upon by the physician, as an indispensable requisite to insure perfect freedom from this complaint. Many medical men lay great stress upon attention to diet, as necessary in the treatment of this and other chronic diseases, and so it is; no one acquainted with my writings will suspect me of

* Large towns have been emphatically called *the graves of the human species.* Constant residence in a populous city has certainly a very considerable influence in producing disease, and abridging the term of human life. The constitution of the generality of citizens is weak, irritable, and easily susceptible of diseased actions, a fact, to the truth of which the experience of every medical man who has practised much in such places bears ample testimony. The Roman poet most justly exclaims against

——— Pericula mille
Sævæ urbis.

undervaluing it, but I am fully persuaded that regimen is of still greater moment, and experience proves, that exercise is the most essential branch of the athletic regimen. I am disposed to think that exercise is not so strenuously recommended as it ought to be, or its virtues so fully known as they deserve.*

Cheerful company and lively conversation, with proper clothing, are also subjects of importance. The feet and chest should be kept especially warm, and, if the debility be great, with a considerable reduction of the natural heat of the body, a flannel waistcoat worn next the skin during the colder months will be very proper. The bed clothes should be no more than sufficient to keep the patient comfortably warm, and a mattress is always preferable to a feather bed.

Diet has always been considered a subject of no small moment in the treatment of the present complaint. The grand maxim with regard to it is, to eat and drink sparingly, at stated intervals, and of food the most digestible, and that agrees best with the individual. No bilious or dyspeptic persons should eat more than four times a day, and those periods ought to be, as near as possible, at regular intervals of four or five hours; say eight, twelve, four, and nine o'clock. It is a common, but very erroneous and injurious supposition, that such patients ought to eat little and often; because by taking food in this way, scarcely two hours elapse throughout the whole day without something being swallowed, by which means the stomach has no time for the perfect digestion of the previous meal, and is kept in a constant state of irritation and disorder. No rest is given to it, and, therefore, instead of gaining strength, it loses it. It may be safely received as a general rule, that food should not be taken in the intervals of meals, and a want of this kind will seldom be felt by those who adhere to the hours just mentioned.

Where a considerable degree of hardness exists in the pulse, with much feverish heat generally, an inflammatory tendency exists in the system, when a diet wholly vegetable, and even a total abstinence from wine, must, for the most part, be observed, and is strikingly beneficial. The best vegetables are, turnips, brocoli, French beans, asparagus, and potatoes; no other should be taken. In this state of the complaint, light, plain puddings are allowable, but pastry is altogether inadmissible in every description of case.

In the greater number of instances, however, the hardness of pulse just noticed is not present, and then an animal diet is the

* The system called *training* merits most particular regard from every dyspeptic, and more especially from those who are suffering under the present malady in its aggravated and protracted forms, on account of its surprising influence in giving tone to the digestive organs, and every part of the frame, and the marked effect it has in improving and equallizing all the secretions. See the note at page 260.

best. Mutton, venison, lamb, and tender beef, are the most wholesome and digestible of meats; and next to these come partridge, pheasant, fowl, chicken, and hare. Of either of these, a small quantity roasted and little done may be taken at dinner, it being seldom proper for a dyspeptic to eat animal food more than once a day. The flesh of full grown animals is to be preferred to that of young ones, and I know no exception to this rule. Some medical men, however, have gone so far, and erred so widely, as to assert the reverse of this to be the truth, but they are blind leaders. Preference has, indeed, been given to veal over beef, by some physicians of great judgment, who agree as to the superior digestibility of the flesh of full grown animals, in general; but, according to my experience, it is a preference that ought not to be maintained, for I have found few articles of diet more indigestible and irritating than veal, and, therefore, in my practice, it is universally forbidden to those of weak digestive powers. Full grown tender mutton and venison are unquestionably the most digestible, and best of all meats. All salted and dry meat is inadmissible, and boiled fresh meat of any kind is not quite free from objection in severe indigestion. Excepting oysters in their natural state, every sort of fish is bad, in the present disorder, and must be altogether avoided, at least in the beginning.

In common language, fish is called a *light* article of diet, but it is an error to suppose it to be easy of digestion. It is given to patients convalescent from acute diseases, in preference to flesh, not because it admits of a more ready solution in the stomach, but on account of its exciting less heat and fever. Both vegetable and animal food done a second time is very objectionable, and, therefore, hashes, harricoes, stews, and the like, must make no part of the dyspeptic's cookery. In all cases, plain biscuit is preferable to white bread, but well-made brown bread is better than either, when the bowels are confined, and there is strength of stomach sufficient to take it.

Generally speaking, all slop fluids are much more difficult of digestion than solids, and a weakened stomach is quite incapable of digesting even the ordinary quantity which is taken in health with satisfaction and benefit. It is for this reason that broths and soups are injurious to most dyspeptics, and that drinking too freely of soup, tea, and the like, will sometimes throw such persons almost into agonies. They should, therefore, be abstained from as much as possible.

Port wine is almost invariably hurtful, but a little foreign white wine taken after dinner, is sometimes useful. The best wine is old sherry, but with some patients good claret answers

very well. If wine cannot be taken, a little weak brandy and water may sometimes be tried, but it is what I should seldom recommend, and ought in all cases to be changed for wine or beer, as soon as possible. Mild home-brewed beer generally agrees better than wine or brandy. It ought not to be strong ale, which is at all times difficult of digestion; neither should it be poor weak beer, but that of a moderate strength or body. There exists a general prejudice against the use of beer in indigestion and bilious complaints, but I am fully persuaded it is, in the majority of instances, without substantial foundation. If patients are properly treated, they will, in general, find *good home-brewed* beer to agree very well. To quench thirst in the intervals of meals soda water may be occasionally used: it is exceedingly grateful and effectual, and that made with the soda powders appears to me very much better than the bottled water.* For the partial or general heat and feverishness so often present in this malady, it is an appropriate and efficient draught, and in the summer is particularly useful. Soda water must not, however, be very frequently resorted to. Since the publication of the former edition of this book, I have been led to notice more attentively its influence on the stomach, and my decided conviction is, that if often used it weakens the digestive organs and whole frame. Well made toast and water is likewise a proper drink, and so is lemon or orange tea, that is, lemon or orange-peel infused in boiling water. The latter possesses a stimulus which is very useful to some disordered stomachs.

Tea, cocoa, or thin chocolate, made with water, may be taken for breakfast, and at tea-time; with biscuit, bread and butter, or dry toast. Rolls, and all other spongy bread are bad; and coffee must be wholly forsaken. One fresh lightly-boiled egg may be taken at breakfast, if it agrees. Whatever liquid is taken in the morning and evening, the patient should not exceed a common breakfast-cupful at each time.

The supper should be very light and small in quantity, consisting of a roasted apple, or potatoe, or an egg lightly boiled, with a biscuit, or some bread and butter. In summer, a little good ripe fruit in season will make a very wholesome supper. A small tumbler-ful of mild beer may likewise be allowed if it agrees, and the portion of food then taken be solid. Some dys-

* The best soda water is made with toast and water, instead of plain water. The toast has so much of a softening quality, that it imparts an additional spirit to the soda water prepared in this manner, and renders it both more agreeable to the palate, and more grateful to the stomach. In winter, the water should be lukewarm.

The bottled soda water should rarely or never be drank. It is commonly prepared in an improper manner, and even when well prepared is, I am persuaded, a very injurious drink, and much more likely to cause than cure indigestion.

peptics find well-made grit or oatmeal gruel, with or without milk, to form an agreeable and wholesome supper. Further information respecting diet will be found under that article at page 154.

The food should be well masticated, and quietness, with rest, observed for at least half an hour after each meal. Digestion almost invariably proceeds much better in a sitting, than in a recumbent position.

There are two determinate principles of superior importance, which we have to guide us in the treatment of the present complaint, both as it respects diet and medicine, a notice of which shall form the conclusion of what I have to say on this important subject. These principles are highly valuable, because they lead us directly to an acquaintance with two opposite states of the constitution, with which indigestion is continually found to be associated, and which demand a different treatment, pointing out to us when a direct tonic plan will generally answer, and also when the comfort and even safety of our patient requires a mild, unstimulating, and rather lowering mode of procedure.

These principles are, 1st, That when the pulse is constantly hard, all the secreting surfaces are in a measure bound up, the skin being dry and harsh, and the extreme vessels on the surface of the alimentary canal, also suffering constriction, as evinced by the dry condition of the mouth and nose,—when the more permanent stimulants and tonics, as iron, bark, strong alkalies and bitters, &c. are in the beginning totally inadmissible; 2nd, That when there is no perceptible hardness in the pulse, the secreting surfaces are more or less free, and the skilful use of permanent tonics will be generally a certain means of recovery, which, indeed, cannot then be insured by any other kind of remedies.

The hardness of pulse here alluded to, is not the striking contraction felt in acute inflammation, but a slighter hardness, which is readily felt on lightly pressing the artery with the finger, although the pulse is often feeble at the same time. United with this state of the pulse, there is commonly a good deal of permanent tenderness, on pressure, in the pit of the stomach, with much feverish irritation generally, and in some instances there may be also symptoms of determination of blood to the head, or other indications of an inflammatory tendency in the system.

In this state, the great object of treatment, at the commencement, should be to relax the blood vessels and secreting surfaces, in other words, to produce a soft skin and natural pulse, by the cautious use of the mildest medicines, as nitrate of potash, tartarized antimony, ipecacuanha, or small doses of carbonate of

ammonia.* The compound decoction of sarsaparilla, or the alkaline solution of this root, (page 100,) is sometimes of remarkable service in these cases, as a tonic and alterative. Frequently, the nitro-muriatic acid bath will also be very useful, and the occasional employment of leeches to the seat of local tenderness, and the tepid bath at ninety-six degrees, will be found valuable auxiliaries. After these means have been employed for some time, and the condition of the patient thereby improved, the pulse and skin being softened, small doses of the mildest tonics, as the mineral acids, preparations of iron, or sulphate of quinine, may be employed with advantage, in conjunction with the preceding remedies. As tonics here, the acids are generally borne best, and next to them the preparations of iron. If either of these produce dryness of skin, sensible tightness of pulse, increased heat, or an augmented sense of oppression, we may be sure they are doing harm, and either the dose should be lessened, or, if necessary, they must be laid aside, at least for the present. If the patient's bowels are kept gently open, he is invariably better able to bear tonics than he otherwise would be. Mercurial preparations are generally very useful here, but they must be employed in small doses, and in conjunction with emetic tartar, or ipecacuanha. The pill, No. 98, or 99, page 120, may be taken every second night.

The same rules apply to diet, and will explain why an animal food diet, or one that is stimulating, agrees best with some dyspeptics, while others gain most advantage from a diet of vegetable food, or one that is very mild and unstimulating.

As it respects diet then, in the state just described, we find, that in the beginning it should be formed chiefly of the most digestible vegetables, and preparations of barley, oatmeal, light bread puddings, and such like. Slops, in small quantities, can sometimes be well borne by this class of patients. Meat should be taken in very small quantity, and never more than once a day. Wine, beer, and other stimulating drink, must be wholly laid aside. When the pulse is obstinately tight, the patient will often find a great and sensible advantage from abstaining from all kinds of animal food two or three days in the week.

But in the opposite state of the constitution, when there is no perceptible hardness in the pulse, the skin being almost free from dryness, our object is directly to augment the general energies of the system, and we may at once commence with the direct tonics, and permanent stimulants, before alluded to, (acids, iron, bark, strong alkalies, &c.) and their skilful employment will seldom disappoint our expectations. The diet must

* The carbonate of ammonia and tartarized antimony are often particularly valuable in this species of dyspepsia. See what is said of them at pages 19 and 29.

also be generous, though small in quantity, consisting principally of meat, biscuit, wine, and good malt liquor, with very little slop fluid.

Greater care and perseverance will in general be necessary to perfect relief in the first state above described, than in the second; and in the former case, I think it will almost always be found, that much exercise in the open air is absolutely requisite to give full effect to the medicines employed, and is, in short, a *sine qua non* in the successful treatment.

The posthumous works of the late Dr. Baillie, contain some useful remarks on indigestion, and I shall close this part of that subject by extracting them for the benefit of my readers.

"There is no complaint," says he, "more common in this country than an imperfect condition of the functions of the stomach. This generally shows itself by more or less of flatulence, by acidity, by a bitter taste occasionally felt in the mouth, and often by some degree of costiveness. This condition of the stomach generally arises from something wrong in the quantity or quality of the food, from anxiety of mind, and from a due degree of exercise not being regularly taken. It makes its progress very gradually, continues always for some months, and often even, more or less, for years.

"The first object of attention should be to remove, as far as possible, the causes which produce it. Every kind of food should be avoided which the patients may have found, from their own experience, to have disagreed with their stomach. Most commonly, animal food that is very fat, or much salted, or fried, is difficult of digestion, and should either be eaten very sparingly, or should be altogether avoided. Young and white animal food is in general more difficult of digestion, than what is brown, and of middle age. The vegetables which are eaten should be very well boiled, and should be taken sparingly by such persons as are subject to flatulence and acidity. The waxy potatoe is almost constantly very difficult of digestion, and in general should be avoided altogether. There should never be so much food taken at a time as to give the feeling of fulness or distention in the stomach: and, except under very particular circumstances, there is no advantage in eating oftener than three or four times in twenty-four hours. The best common beverage in disordered conditions of the stomach is water, or toast and water; and three or four glasses of wine may be taken at or after dinner, according to the habits of the patient, or other circumstances. That wine is to be preferred which agrees best with the stomach, of which he is himself the most competent judge. Daily exercise is almost constantly necessary in order to preserve good digestion. Riding on horseback is, upon the whole, the best, for it gives a motion to the abdominal viscera, which no other exercise is capable of; but walking is also very useful. A combination of the two is preferable to either; for riding on horseback chiefly exercises the abdominal viscera, and walking chiefly exercises the limbs and the thoracic viscera. Anxiety of mind should be avoided, whenever it can fairly be done; but it is often impossible to take advantage of this remedy.

"With respect to medicines, there are none for this complaint which can be called specific. The most beneficial, however, which I have known, are rhubarb, and some form of bitter medicine combined with alkalies. Eight grains of rhubarb formed into pills with soap, taken

every night at bed-time, and some bitter,—as infusion of cascarilla, columba, quassia, or gentian, with some grains of soda or potassa, dissolved in it, taken in the morning and before dinner,—will often be very useful in this kind of disordered stomach. These remedies should be continued for four or five weeks at a time, should then be omitted for two or three weeks, and occasionally resumed. If the alvine evacuations should be considerably lighter in their colour, or much darker than natural, mercury, given in moderate doses, and not for so long a time as to injure the constitution, will often be of great use. *The large and indiscriminate employment of mercury in complaints of the stomach has, I think, been often very hurtful.* Where acidity has been particularly prevalent in the stomach, I have sometimes found it more effectually corrected by the diluted mineral acids than by alkalies. Ten or twelve drops of the diluted sulphuric or diluted nitric acid, mixed with an infusion of some bitter, and taken twice a day, will sometimes be very beneficial in this condition of the stomach.

"There is an affection of the stomach in which the digestion is very imperfect, and in which considerable quantities of a transparent viscid mucus is formed. This often produces nausea, and is often brought up by vomiting. According to my experience, this condition of the stomach has been frequently little benefited by medicine; but sometimes I have found the compound tincture of benjamin of considerable use. A drachm of it may be taken mixed with water and some mucilage of gum arabic, three times a day."—*Dr. Baillie's Posthumous Writings, p.* 194.

I have remarked, under *Consumption*, at page 318, that severe dyspepsia, or indigestion, sometimes gives rise to cough, and such a state of irritation and disease in the lungs, as forms a species of pulmonary consumption, and I am desirous of making, in this place, a few observations on the symptoms and treatment of this affection. It is highly desirable that dyspeptic consumption should be detected in its early stages, since it is then often curable, but if allowed to go on to a late period before its nature is ascertained, and the proper remedies applied, it is generally as intractable as the more common forms of the disease originating in the lungs themselves.

The *symptoms* of dyspeptic phthisis are those of ordinary phthisis detailed at page 319, combined with those of considerable disorder in the digestive organs, enumerated at page 468. In the commencement, the former complaint may be distinguished from the latter by the following signs. The countenance in dyspeptic phthisis, although pale, sallow, and with a dark ring round the eyes, is not attended so early with the loss of flesh, and the general expression of disease, nor with the movement of the nostrils, generally observed in common pulmonary consumption. Here the skin is dry, shrivelled, and scurfy, while, in ordinary phthisis, it is familiarly known to be delicate, pale, smooth, and moist. In the former affection the tongue is loaded, the breath fœtid, and the temper irritable; in

the latter, the tongue remains clean, the breath untainted, and the temper amiable. In consumption from indigestion, there is emaciation of the muscles of the limbs, whilst the face is little or not at all shrunk, at least in the beginning; in true pulmonary disease, the emaciation takes place in all parts of the body simultaneously. In the former, there is scarcely ever that marked difficulty of breathing on exercise, which so frequently attends even the commencement of the latter. In dyspeptic consumption, the symptoms of disorder in the digestive organs are always present, and frequently severe,—such are, costiveness, flatulency, acidity, loaded and irregular bowels, an impaired and capricious appetite, and a sense of oppression after eating;—symptoms that are nearly absent in the beginning of other species of consumption.

The *causes* of this affection are the same as those which give rise to indigestion, and are detailed at page 469.

The *treatment* of cough and consumption arising from disorder of the digestive organs, consists in combining the means employed for the cure of indigestion, with those proper in true pulmonary disease; and the chief of those are mild mercurials and aperients, vegetable and metallic tonics, blisters or issues, a mild diet, and change of air and scene.

The bowels must be carefully regulated by the use of an aperient pill, as No. 100, or 101, page 121, or a little *Beaume de Vie*, twice or thrice a week, at the same time that we endeavour to restore healthy secretions from the bowels and liver, by giving the pills, No. 99, or 98, every night, or every other other night, and to strengthen the organs of digestion, and the whole frame, by administering some mild vegetable or metallic tonic during the day. As an alterative, to restore healthy secretions from the alimentary canal, the pill, No. 99, page 120, given every night at first, and afterwards every other night, will be found generally applicable, and of superior advantage. Together with this, some tonic is almost universally called for here, and I have found great benefit to result from the use of the pills, No. 102. The pills, No. 103, 104, 106, or 115, or the mixture, No. 77, 78, or 85, are also sometimes of much service. In using strengthening medicines, care must be taken not to increase the heat and feverishness so often present; if the medicine employed does so, it should be immediately changed for another. Blisters to the pit of the stomach, or an issue between the shoulders, should never be neglected, and are generally attended with considerable relief.

A decoction of dandelion is often eminently useful in this disease, and the juice of the plant is still more efficacious. The

decoction may be made by boiling two drachms of the root in two pints of water down to nearly a pint, of which the dose is four table-spoonfuls three or four times a day. Of the fresh expressed juice, two or three table-spoonfuls may be taken, in chamomile tea, three times a day. If it tends to oppress the stomach, some aromatic, as a few cloves, or cardamoms, should be infused in the decoction.

Ipecacuanha also is an eligible medicine in this complaint, on account of its power of stimulating the stomach at the same time that it promotes expectoration, and relaxes the skin and bowels. It may be advantageously taken in conjunction with the dandelion, or any other medicine, a grain of the powder being made into a pill with a little soap, and repeated three times a day.

As a palliative for the cough, two or three of the pills, No. 107, or 108, may be taken at bed-time, or when the cough is particularly troublesome. They are frequently very useful.

The diet, throughout the course of this species of consumption, should be mild and nourishing, and precisely such as I have recommended for *Indigestion*, at page 480-81. Asses milk is an article of diet much to be recommended in this complaint. In the general regimen, every thing which tends to impair the vigour of the stomach and bowels must be studiously avoided, and all proper means of strengthening these organs should be perseveringly employed. Horse exercise, and travelling in an open carriage, are particularly indicated; and, if the patient's means will allow of a removal into a warmer climate for a year or two, Undercliff, in the Isle of Wight, or the interior of the island, Cornwall, or the southern parts of Devonshire, will be found very eligible situations.

OF INFLAMMATORY FEVER.

This fever is so named from its being attended with the symptoms denoting intense heat, and general inflammation or high febrile excitement in the system, by which it may always be readily distinguished from either the nervous or putrid fever. It is technically called *Synochus*. By some writers it is called acute continued fever; and the *bilious fever* is merely a variety of it, bilious vomiting, and a yellowish suffusion of the skin, being here superadded to the usual symptoms. See FEVER, page 400.

It comes on with a sense of lassitude, pains over the whole body, but more particularly in the head and back, chilliness, succeeded by transient hot flushes, and terminating in a violent

and continued heat.* To these succeed redness of the face and eyes, throbbing of the temples, great restlessness, unquenchable thirst, oppression of breathing, and nausea. The tongue is covered with a thick white fur; the urine is red and scanty; the body costive; and the pulse quick, full and hard.

At the commencement, and often for many days after, there is little or no disturbance of the mind; but if the fever runs very high, and proper depleting measures are not used at an early period, stupor and delirium come on, the imagination becomes much disturbed and hurried, and the patient sometimes raves violently.

When it continues long, the *symptoms* of high excitement are frequently changed to those of debility, and the fever by degrees assumes a low nervous character.

A moisture appearing on the skin about the seventh day, succeeded by an universal and natural perspiration; bleeding from the nose; the appearance of scabby eruptions about the mouth and ears; the formation of abscesses; looseness; the deposit of a copious red sediment in the urine; and the pulse becoming slower and softer, are favorable symptoms: but intense and continued pain in the head, with high delirium; extremely laborious respiration; the pulse continuing strong and hard; picking at the bed clothes; hiccup; and involuntary evacuations, are unfavorable appearances.

Sudden transitions from heat to cold; swallowing cold liquors when the body is much heated by exercise; excessive use of spirituous liquors; violent passions of the mind; long exposure to the intense rays of the sun, and the sudden repulsion of eruptions, are the most *usual causes* of this fever. It attacks persons of all ages and habits, but more particularly those in the vigour of life, and of a plethoric constitution. It occurs at all seasons of the year, but is most frequent in the spring, and beginning of summer.

It is *distinguished* from typhus by the *strength* and *hardness* of the pulse; by the *white fur* of the tongue; and by the *high* colour of the urine. See also the differences marked page 404.

TREATMENT. As the symptoms of inflammation and high excitement are the prominent features here, the principal indication is, to reduce the violent action of the arterial vessels,

* OBSERVE: The heat of the skin is of the kind usually called *burning*, in contradistinction to that peculiar biting or acrid heat which occurs in typhous fevers. By laying the hand on the skin of a patient labouring under inflammatory fever, the sensation of heat communicated is at first very considerable, but on suffering the hand to remain for a short time, the sensation of heat gradually diminishes, until it seems to the touch but little above the natural temperature of the body. In typhus, on the contrary, the longer the hand is suffered to be in contact with the patient's body, the more pungent and perceptible does the heat become, and the *biting* or *acrid* sensation of heat remains in the hand even after it is removed from the patient.

and to bring it into a state as nearly natural as may be; which is most effectually done by the employment of blood-letting, cooling purgatives, and relaxants, or medicines which have the power of relaxing the skin, and promoting a gentle and universal perspiration. From twelve to sixteen or twenty ounces of blood may directly be taken from the arm, from a large orifice, so that the blood may flow quickly; and should the patient be young, or of a vigorous habit, and the disease still continue very little or not at all subdued by this evacuation, the operation may be repeated to the same extent, after the lapse of three or four hours. In the case of persons enjoying robust health, it will be requisite to bleed at once to the extent of twenty ounces, and sometimes to repeat it, even to the third or fourth time; but in delicate subjects this is rarely if ever advisable. Should there be pain or much uneasiness in the head, chest, or belly, local bleeding from these parts should be immediately had recourse to, by means of leeches or cupping. The saline purgatives are generally the best in this fever, and either of the forms, No. 27 or 28, page 103, may be selected; a full dose being administered once or twice daily, according to its effects. If the stomach be in an irritable state, a drachm or two of both the Epsom and Glauber's salt should be given in a glassful of soda water, the whole being taken in the act of effervescence, and repeated as occasion may require, so as to keep the bowels in a lax condition; or a couple of grains of calomel may be mixed with five grains of cathartic extract, and made into two pills, to be given once or twice in twenty-four hours.

The most valuable relaxants are James's powder, the solution of acetate of ammonia, and the saline effervescing draught, No. 24, page 102. After the employment of the lancet, and purgatives, five grains of James's powder may be given every four hours, made into a pill with a little conserve, each pill being washed down with the draught, No. 24, page 102.

To abate thirst, the patient may drink freely of toast and water, of an acidulous mixture made by adding half an ounce of tartaric acid and two ounces of loaf sugar, to from a pint to a pint and a half of water, according to the taste of the individual.

The late Dr. Currie, of Liverpool, was in the habit of dashing cold water over his patients attacked with high fever, which, in the commencement of the disease, is a practice much to be recommended, and enjoying the countenance of the profession. The affusion of cold water moderates the excessive heat and thirst, and other symptoms of high excitement, lowers the pulse, and where it agrees, and is resorted to early,

will sometimes cut short the fever at once, and prove more directly and permanently beneficial than any other remedy. The best time to use it is when the fever is at its height, but it may be employed with safety at any time, during the first eight or ten days, that the heat of the body is steadily above its natural state. It should not be employed where there is any sense of chilliness present, and if this remark be borne in mind, it can scarcely ever be injurious in the early periods of the disease. For further information on this point, see the article TYPHUS.

Cold drink answers in some small measure the purpose of cold affusion, and may be freely allowed through the early periods of the fever.

The patient's chamber should be airy and freely ventilated; and the bed ought to be lightly covered with clothes.

In bilious and other varieties of inflammatory fever, which continue, in a subdued degree, after the employment of suitable evacuations, a combination of calomel and James's powder, given two or three times a day, will sometimes be of great service.

Take of best calomel, ten grains; James's powder, thirty grains; conserve of hips, a sufficient quantity to make the ingredients into ten pills: one to be taken twice or thrice in twenty-four hours.

The diet must be very simple, and small in quantity. All solid food should be abstained from, even animal broths will be found injurious, and the patient must take only thin gruel, preparations of barley, and toast and water. Fresh acidulous fruits are proper. After the disease has abated, he must return to his ordinary diet by very slow degrees, and with great attention to the quality and quantity of his food, as impropriety in diet, and the use of solid food too soon, is one of the most frequent causes of relapse in all fevers, especially in those attended with great excitement.

OF INFLAMMATION.

By the term *inflammation* is generally understood, the state of a part in which it is painful, hotter, redder, and somewhat more turgid than natural; which topical symptoms when present in any considerable degree, or when they affect very sensible parts, are attended with fever, or a general disturbance of the system. See page 401.

All parts of the body, except the skin, nails, hardest part of the teeth, and hair, are subject to inflammation. Healthy in-

flammation is of a pale red; when less healthy, it is of a darker colour; but in every constitution, the inflamed parts will partake more of the healthy red, the nearer they are to the source of the circulation. Speaking of inflammation in general, it may be observed, that when situated in highly organized and very vascular parts, it is generally more disposed to take a prosperous course, and is more governable by art than in parts of an opposite texture. The nearer also such vascular parts are to the heart, the greater will be their tendency to do well. Hence inflammation of the skin, cellular substance, and muscles, more frequently ends favorably, than the same affection of bones, tendons, and ligaments. It is also more manageable by surgery; for those parts of the body, which are not what anatomists term vascular, seem to enjoy only inferior powers of life, and, consequently, when excited in a preternatural degree, frequently mortify.

But inflammation of vital parts, though they may be exceedingly vascular, cannot go on so favorably, as in other parts of resembling structure, but of different functions; because the natural operations of universal health depend so much upon the sound condition of such organs. The truth of this observation is illustrated in cases of inflammation of the stomach, lungs, &c.

Too full a diet, particularly too free a use of fermented liquors, may be regarded as the chief *predisposing cause*. All causes which check habitual discharges, whether artificial or natural, especially the secretion by the skin, and all causes which considerably increase the force of the circulation, predispose to inflammation: and, if applied suddenly and to a great degree, may act as *exciting causes*. Whatever increases the impetus of the blood towards the part may become a cause, and all mechanical and chemical irritants are well known frequently to produce it; such are heat, sudden changes of temperature, the action of strong acids, alkalies, metallic salts, acrid vapours, acrid vegetable oils, bruises, wounds, &c. The strong, vigorous, and plethoric, are most liable to inflammation.

Treatment. In the present article we intend to advert only to the treatment of external inflammation, such, for example, as occurs in the limbs, trunk, or any part of the surface of the body; as the inflammatory affections of internal organs, and particular parts which are more deeply seated, will be treated of under their respective heads.

Inflammation is of two kinds, *acute* and *chronic*, and it will be necessary to notice the treatment of these modifications separately.

Acute or active inflammation is that which is, for the most

part, attended with considerable heat, redness, and pain in the part affected, and with more or less fever in the general system, and a hard, quick pulse. Its characters and progress are in general clearly marked, although its symptoms of course differ, in respect to intensity, in different instances.

In all cases of acute inflammation situated externally, the first circumstance to be attended to, is the removal of all such exciting causes as may happen to present themselves. If the irritation of a splinter of wood, bone, &c., for example, were to excite inflammation, every one would immediately see the propriety of removing it, and such a course must be adopted with every kind of mechanical or chemical irritant present. After this is done, it will be necessary to moderate the increased action of the arterial vessels, thus lessening the velocity of the blood's motion towards the inflamed part, and to increase the secretions, by means of blood-letting, purgatives, antimonial and cooling diaphoretic medicines, cold lotions, a spare diet, rest, and a relaxed easy position of the part inflamed.

If the patient be young, robust, and full of blood, and the inflammation run high, he should lose fourteen or sixteen ounces of blood from the arm, and if this evacuation has but little effect in arresting its progress, it ought to be repeated; but, in general, the application of leeches, at a short distance from the affected part, will be sufficient and preferable, more especially in feeble or elderly persons, and where the inflammation appears to be connected with a deranged state of the digestive functions. After this, we must endeavour to restore free and healthy secretions from the bowels, liver, and skin, by administering purgatives and antimonials. The employment of calomel and saline purgatives in every case of acute inflammation, whether situated externally or internally, is of the first importance. Two of the pills, No. 98, page 119, should be given directly, and followed by a black draught in the morning, or after three or four hours, and these pills must subsequently be continued every day, until the inflammation is much relieved, when they can be employed once in two or three days, or as occasion may require. At the same time, the following cold lotion ought to be constantly applied, by means of linen rags.

Take of sal ammoniac, an ounce; common or distilled vinegar, three ounces; cold water, twelve ounces.—Mix for a lotion.

Or either of the lotions, No. 68, or 69, page 113, will be proper. Sir Astley Cooper thinks, that one of the best lotions that can be applied to inflamed parts, for the purpose of producing cold, is a mixture of one ounce of rectified spirit of wine, and five of water. In applying these lotions, the linen

ought to be fine, and put lightly on the inflamed part, in order that evaporation may go on with facility, this being the grand object in view.

The tartar emetic is likewise an invaluable remedy in all acute inflammations, and it may be given as recommended under INFLAMMATION OF THE LUNGS, provided the calomel and saline purgatives do not speedily produce the desired effect.

The saline effervescing draught, No. 24, page 102, may be given thrice a day, if the heat and fever are considerable; and should the pain be very severe, an opiate ought to be occasionally administered, after evacuations have been procured. Solid opium, or the compound ipecacuanha powder, combined with calomel, forms the best opiate in these cases. Five grains of the compound ipecacuanha powder, and one grain of calomel, made into a pill with confection of opium, and given at night, or when the pain is violent, will be found very useful.

The whole body, but more especially the inflamed part, must be preserved in as complete a state of rest as possible; and in inflammation of the limbs a proper position is highly necessary. They ought not to be allowed to remain in a dependent position, but be constantly supported in one that is elevated and easy, so long as the inflammation is at all violent. Sir Astley Cooper gives us the following example of the use of position in inflammation of the leg, which I think deserving of being recorded in this place.

"I was sent for (says he) to see a gentleman farmer in the neighbourhood of Rayleigh, in Essex, who for a long time had been subject to a very severe inflammation in both his legs; they were exceedingly red, and very much swollen, in a state of threatening gangrene; the constitutional irritation was very great, and the tongue covered with a brown fur. I found him with his legs in a tub of water; I took out one of them, and it smoked excessively; I saw there was no time to be lost, had him immediately placed on a sofa, and contrived to rest his legs upon the end of the sofa; consequently they were raised considerably higher than his body: the vessels soon began to unload themselves, and the skin, in a short time, was evidently less red than when taken out of the water. I then applied flannels wrung out of warm water; these soon produced a very considerable perspiration, by which the cellular membranes became unloaded, the swelling much less, and the pain materially abated. He gradually recovered, and in six weeks was enabled to ride a considerable distance to market." *Surgical Lectures, No.* 6.

The diet must be spare and low, all spirituous and fermented liquors, and animal food, being avoided for the first two or three days, or until the acute symptoms have passed away. Watery, cooling, mucilaginous drinks are highly proper and useful, and the best of such fluids are, whey, butter-milk, barley-water, water-gruel, and decoctions of dried fruits, as figs, &c.

Inflammation often terminates in suppuration or abscess, and now and then in gangrene or mortification; when the treatment will be the same as that laid down for those diseases. See *Abscess and Mortification.*

When suppuration takes place, the pain and redness, for the most part, abate, the temperature falls nearer to the healthy degree, and the throbbing becomes more sensible. A conical eminence, or *pointing*, as it is termed, takes place at some part of the tumour, generally near its middle. In this situation, a whitish, or yellowish appearance is generally observable, instead of a deep red, which was previously apparent, and a fluctuation of a fluid underneath may be discovered, on a careful examination with the fingers.

On the approach of gangrene, the part, which was of a bright red, becomes of a livid hue; small vesicles, filled with a thin fetid serum, arise on its surface, and air is plainly felt within the cellular membrane. The pain is suddenly diminished, but the pulse sinks, while the tumour is gradually changed into a black fibrous mass.

By *chronic* inflammation, surgeons mean an inflammatory affection of a subdued and imperfect character, in which the part affected often appears redder than usual, but there are present evident marks of languor and debility in the local circulation. Indeed, the essence of the disease is debility, and the languor often extends, in a greater or less degree, through the whole system. There is seldom much hardness in the pulse here; sometimes it participates in the general weakness, and is small and feeble. A good example of visible chronic inflammation is seen in the eye, when this organ appears permanently red, somewhat painful, and more sensible to light than usual, although not so much so as to prevent the patient going about and transacting business. In delicate habits, this affection generally arises unpreceded by acute inflammation of the part, but in robust frames, and those who are less delicate, it is often a mere sequel or consequence of the latter. But frequently, chronic inflammatory action occurs in internal organs, and parts not to be seen, when it is detected by the presence of pain, uneasiness, and weakness in the part affected, generally associated with a furred tongue, impaired appetite and strength, nervousness, or other indications of derangement of the general health. Of such a case, that disease of the knee-joint forms an instance, which in its advanced stage is commonly called a white swelling. In the beginning, this is simply a chronic, or slow indolent inflammation of the internal part of the joint. The enlargement of the glands of the neck, or other parts of the body, in scrophulous subjects; the formation of tumours of

various kinds, and of strictures in the urinary canal, are but so many additional examples of chronic inflammation, giving rise to determinate maladies. This subject is an extensive and very interesting one, and if I were writing for the profession, it would be necessary to enlarge upon it, but my present purpose being, to convey to the public a little of the most valuable information relating to the various points connected with the preservation of their health, and the cure of their diseases, I must pass on to notice the treatment of chronic inflammation in general. The reader is referred to the article on CHRONIC DISEASE IN GENERAL, for further information on this important subject. Chronic inflammation of the eye, of the glands of the neck, and of the knee, are examples of chronic disease, and what is said in the article at page 304, in reference to the principles of management, is strictly applicable to them.

As I have already remarked, the essence of this disease is debility, and this must never be lost sight of in its treatment, because all very active or violent measures, which inevitably disturb and weaken the constitution, will very rarely fail to aggravate the complaint, and will sometimes do so much injury as no subsequent means can repair. If, therefore, chronic inflammation occur in the eye, glands of the neck, knee, or hip joint, liver, or elsewhere, we must have recourse to mild unirritating measures, which are capable of gradually altering the condition of action in the arterial vessels of the affected part, and of imparting strength to it and the whole constitution, thereby restoring healthy secretions locally and generally. These are the grand objects to be kept in view, and for the accomplishment of them, the use of calomel and opium, as in the pill No. 98, or Plummer's pill, or the pill, No. 99, page 120, with sarsaparilla, dandelion, bark, steel or alkalies internally, and the employment of hydriodate of potash, blisters, tartar emetic ointment, or mild stimulants or corroborants externally, will be found the most efficacious means. I think very highly of sarsaparilla and dandelion as internal remedies. Rest must also be given to the affected organ, with as easy a position as possible. The diet must be nourishing, but rather small in quantity, so as to prevent the possibility of exciting irritation.

It is not my intention to enter into a detail of the variations and particular application of the preceding remedies, likely to be called for in individual instances of chronic inflammation, they being noticed under the head of such inflammation when assuming the character of a determinate affection, such as disease in the knee-joint, liver complaint, &c.; but the subject being one which we are daily called upon to consider, I have thought it highly advisable to show the unprofessional reader

its nature, extent, and the general principles of medical treatment applicable to it. These principles, as above laid down, will be found of universal application in chronic inflammation wheresoever situated, and an adherence to them will not only preserve us from doing injury, but will enable us very generally to effect much good. I cannot but again advert to that fundamental principle of practical medicine, which I have always been desirous of impressing upon the mind of the bodily sufferer, and the consideration of which is of much importance in the present affection, I mean, that THE RELIEF OF IRRITATION IS THE GREAT OBJECT OF MEDICINE. Now this is to be effected only by soothing and slightly stimulant and corroborant measures, and in proportion as we succeed, by the employment of such means, in relieving irritating sensations, so do we free our patient from the symptoms of pain and uneasiness, both local and general, and aid in bringing the diseased organ, and the whole constitution, into a state of healthy and vigorous action. It ought to be particularly remarked here, that large or frequently repeated doses of any active medicine will, consequently, hardly ever fail in defeating this object, and it is on these grounds, that I oppose the employment of mercury in *large* quantities, and particularly if used with the intention of producing salivation; because salivation invariably irritates the whole system, (and therefore the organ diseased,) rendering it weaker, and generally yielding it an easy prey to the most uncomfortable and painful sensations. I repeat, mercury used in small doses, and in combination with antimonials, is invaluable, but in large quantities, it is for the most part destructive.

OF INFLAMMATION OF THE BRAIN.

The characteristics of this disease are severe pain in the head, redness of the face and eyes, intolerance of light and sound, watchfulness, and ferocious delirium.

It often comes on with a sense of fulness in the head, flushing of the countenance, redness of the eyes, and fulness of the pulse; followed by restlessness, and disturbed pulse. Or it may make its attack with pain or a peculiar sense of uneasiness of the head, back, loins, and joints, or tremors of the limbs, and intolerable pains of the hands, feet, and legs:—or with anxiety, and a sense of tension, referred to the breast, with palpitation of the heart. As the disease advances, the pain greatly increases, and with it the redness of the face and eyes; the countenance acquires a peculiar fierceness, the patient talks incoherently, and delirium follows, and often arrives at a state of frenzy. The face becomes turgid, the eyes stare, and seem as if starting from their sockets,

tears and sometimes blood flow from them, the patient resembling a furious maniac, from whom it is often impossible to distinguish him, except by the shorter duration of the disease. The eyes are incapable of bearing the light, and the least noise is intolerable; respiration is deep and slow, and swallowing difficult, the pulse being generally remarkably hard, and small.

The stomach is often oppressed with bile, which is an unfavorable symptom. Sometimes there is a deficiency of bile, which, for the most part, affords a still worse prognostic. The stools being of a white colour, and a black cloud in the urine, are regarded by Dr. Lobb as fatal symptoms.

An injury immediately applied to the brain, such as violent exercise, intoxication, rage, or the head being exposed long to a powerful sun; long and intense study; cold; fatigue; excessive venery; indigestible and poisonous substances received into the stomach; and the suppression of habitual discharges, are the *most frequent causes.*

It occurs most commonly during the progress of general fevers, particularly inflammatory and typhous fevers.

Inflammation of the brain is to be *distinguished* from inflammatory fever, by there being a much greater derangement in the mental functions; and in all the organs of sense, in the former than in the latter. In inflammation of the brain, the symptoms, (as pain and heat of the head, &c.) denoting the local affection, are often well marked before the pulse is much disturbed; in inflammatory fever, the pulse from the commencement is frequent, strong, and rapid.

Treatment. The most vigorous depleting measures are requisite in this disease. It should be commenced by a copious blood-letting from the temporal artery, jugular vein, or arm, through a large orifice, so that the blood may be rapidly extracted. Its extent and repetition must be regulated by the age and constitution of the patient, and by the severity of the symptoms; but the first bleeding should rarely be less than twenty ounces. This should be followed by the application of a dozen leeches to the temples; after which the head should be shaved, and cloths dipped in vinegar and water, or iced water, be freely applied over it, and renewed as often as they show a tendency to become warm. The application of ice to the shaven head is here often of striking advantage.* At the same time, some

* Sometimes the pain and heat in the head in this disease is so extremely great as even to cause cloths dipped in iced water to dry with astonishing rapidity; and then the *cold dash* should be had recourse to immediately. It consists in pouring a column of cold water upon the head, in a continued stream, from a height of from six to nine feet. The patient is to be seated in a large tub; a table is placed at the side of the tub, upon which a man stands, and at as great an elevation as his arms can reach, pours upon the naked head of the patient a steady but continued stream of cold or iced water,

active purgative medicine, as No. 120, page 125, or No. 27, page 103, must be administered, and repeated every morning. If a looseness comes on, care must be taken not to check it; and the same care should be exercised in preventing a suppression of a bleeding from the nose, since these evacuations often act as the most efficient remedies in this disease.

The combination of calomel, James's powder, and opium, noticed under inflammation of the intestines, will be a very proper assistant to the preceding means, and may be administered in the way there advised.

On the subject of bleeding in active inflammations, Sir Astley Cooper remarks, in his lectures,—

"In our endeavours to reduce inflammation, we shall rarely find local means sufficient. Our chief means are constitutional, particularly in the inflammation of vital organs, and the first of these is blood-letting. It diminishes the momentum of blood, and weakens the nervous power, by lessening the quantity of blood going to the head; and as the effect of blood-letting depends upon the quickness with which the blood is drawn away, it is necessary, in employing the lancet, to make a large orifice in the blood-vessel selected for the operation. When considering the propriety of a repetition of the bleeding, little or no dependence is to be placed on the buffy appearance of the blood, since this is often accidental. This buffiness depends on the rapidity of the circulation, and you will witness a cupped state of the blood when the circulation is rapid, although no inflammation is present. A repetition of the bleeding is indicated by a continuance of the hard pulse, that is, by the rapid, contracted pulse. After taking away blood, you will sometimes have a full, throbbing, irritable pulse—it is worthy of particular notice, that this is not the pulse which indicates a second bleeding, but will be relieved by an opiate at night, and a purgative in the morning."

All stimulating liniments applied to the head or legs, with warm bathing of the feet, are of very doubtful advantage, and, in my opinion ought not to be employed. Neither does blistering, on account of its stimulant operation, appear to me advisable at the commencement; but after the general excitement has been reduced by the foregoing evacuations, a large blister may be applied to the nape of the neck, or between the shoulders, and often with much benefit.

Should the disease have followed a suppression of some habitual discharge, attempts to restore it must make part of the treatment.

During the whole course of the disease, the patient ought to

from a watering pot without the rose. The stream should fall as nearly as possible upon one and the same spot; but at first the elevation must be slight, otherwise the shock will be too violent. There is no degree of burning heat which the animal economy is capable of producing, and no violence of pain that can resist its continued application. It usually exerts its full effect in fifteen or twenty minutes. After it, the patient should be wiped dry quickly, and be put to bed. If the pain and heat return, recourse should again be had to this remedy.

be kept cool, and as quiet and undisturbed as possible, light being almost totally excluded. The diet should be the same as that recommended for inflammatory fever, it being absolutely necessary that it should be very spare, and consist merely of toast and water, and such like. Cold acidulated liquors, as lemon or orange juice, mixed with water, should be allowed with freedom.

A little tincture of digitalis given thrice daily is valuable, after the violence of the disease has been subdued by the preceding remedies.

OF ACUTE INFLAMMATION OF THE EYE, OR OPHTHALMIA.

The *symptoms* are piercing pain confined to a point, as if occasioned by the presence of extraneous matter; great heat and redness; the parts swell, and the vessels of the eye not only increase in size and become turgid, but appear more numerous than in their natural state. With these symptoms there are likewise great pain upon the least motion of the eye-ball; morbid sensibility to light; effusion of tears of an excoriating quality; and should the inflammation run high, fever attends.

After a longer or shorter continuance, these appearances gradually abate, or entirely cease; but in some cases, although the patient is left free from pain, tumour, and symptomatic fever, yet the suffused redness of the eye, and the external marks of inflammation still remain, and long continue to exist after every other symptom has subsided, thereby showing that the *acute* inflammation has terminated in one that is *chronic*, that is, possessing a slow and subdued character, in which weakness is apparent.

When the inflammation continues unrestrained in its force, small ulcers, and little collections of matter, are sometimes formed.

In general, the eye appears very red in this disease, but occasionally the inflammation is very deeply seated, when it may be making a quick and dangerous progress without any external redness being apparent, a fact that demands very serious attention. For it has happened, that a surgeon on visiting a patient in such a condition, has thought his disease of no moment from their being little or no visible inflammation, and has only prescribed a common wash, and five or six leeches; on visiting him next day, he has been found with high fever, confined to his chamber, and unable to bear the admission of a ray of light. In this state the eye-lids have been opened to inspect the eye more attentively,—it has burst, and discharged its contents, with

a great quantity of matter! This deep-seated inflammation of the eye may be known by the patient's complaining of acute pain, and being altogether incapable of bearing the least pressure on the ball of the organ.

The *most usual causes* are external injuries, such as blows, contusions, and wounds of the eyes; extraneous bodies of an irritating nature, introduced under the eye-lids; exposure to bleak winds, and cold; too free a use of vinous and spirituous liquors; suppression of accustomed discharges; long exposure to strong light; a fixed attention to some minute object, and inversion of the eye-lids.

It must be remembered, that the inflammation now treated of is of an active character, acutely painful, rapid in its progress, and in which the eye cannot bear the light. It is also generally attended with fever, and is of short duration; for though the redness of the eyes may continue for a considerable time after the pain has greatly abated, and the fever wholly subsided, yet the disease has then become *chronic*, or, in other words, of a slow indolent character, the essence of which is weakness. This is a point worthy of attention, for by mistaking a chronic inflammation of the eyes for one of an active kind, and, in consequence, having recourse to the abstraction of blood, purging, and other debilitating measures, the eyes have been frequently irretrievably injured. The slow, indolent inflammation of the eyes, so often witnessed, is known either by its having followed, and become a termination of, an acute inflammation, or from its having arisen slowly; it being, in both instances, of some continuance, and unattended by that acute pain which denotes the present disease.

Treatment. The remedies for an acute inflammation of the eyes are the same as in other inflammations, and consist in bleeding, purging, calomel and opium, the use of cooling febrifuge medicines, and the employment of blisters. If the inflammation run very high, a pint of blood should be taken from the arm; but, in general, the application of eight or nine leeches to the temples will be sufficient, they being re-applied after a short time, if the symptoms require it.

In very severe cases, however, it will be necessary to bleed from the arm a second, third, or fourth time, and that within a short period, in order to prevent the total destruction of the eye. Some surgeons have advised, that the inflamed vessels should be scarified at the same time, but this, in my opinion, is improper in the early stage of the disease, as likely to create irritation, and maintain the inflammation.

After this, calomel and opium should be given as advised under *Inflammation of the Intestines*, and the purgative medi-

cine recommended in inflammatory fever may be administered, and repeated every morning; and a large blister be applied to the nape of the neck, or a small one behind each ear.

The cooling febrifuge draught, No. 24, page 102, ought to be taken every three hours; and the following lotion be applied constantly.

> Take of solution of acetate of ammonia, half an ounce; hot distilled water, six ounces; soft extract of opium, ten grains.—Dissolve the soft extract of opium in the boiling water; strain through linen, and add the acetated liquor of ammonia. Let it be applied over the eyes by means of linen rags, kept constantly wet with it, occasionally insinuating a little between the eye-lids by the use of an eye-glass.

No cold lotion should be used in the first stage, but when the violence of the complaint has in some measure abated, either of those marked No. 11 and 12, page 98, may be employed, instead of the warm collyrium.

When our endeavours to check the acute inflammation are unsuccessful, and we are threatened with a rupture of the cornea, or anterior membrane of the eye, which is known by the membrane losing its transparency, and a white ring forming round its circumference, it has been found highly advantageous to puncture the aqueous humour, by inserting the point of a common lancet into the anterior chamber of the eye. So great relief has always followed this operation, as to make it one of great moment when violent inflammation threatens to terminate in a rupture of the organ. It has been successfully used by Mr. Wardrop, and Mr. Ware, and appears to operate by the sudden removal of tension.

Every thing must be avoided which would occasion irritation. The patient should be kept quiet, and in a chamber where the light is partly excluded. At the commencement of very acute cases, the light ought to be wholly excluded; but when the patient is recovering it must only be moderated, and the eyes gradually brought to bear it in its usual strength. In the worst cases, the diet must be very spare, and the same as advised for inflammatory fever; but in less acute examples, a very mild diet of vegetable food should be observed, animal food, and all spirituous and fermented liquors, being avoided.

It is proper for me to remark here, that a moderate inflammation of the eyes is often seen in persons who are, notwithstanding, able to go abroad, and transact their usual business, and which may continue for many weeks, months, or years. In this case, the eyes look red, and are occasionally painful, though not often acutely so; but there is little or no feverishness present, and the complaint seems wholly to be a disease of

debility, since it is met with, for the most part, in persons of delicate health, and weakly habits, and is invariably benefited most by slight astringents, stimulants, and tonics. This is what surgeons call a *chronic* or indolent inflammation of the eye, and requires the administration of some strengthening medicine, as the pills No. 102, or 103, page 121, during the day, with the pill No. 99, every other night, and the application of a stimulant lotion or ointment to the eyes. The eye water, No. 15, page 98, is very useful; but, in general, there is no external application equal to the nitrated ointment of quicksilver, No. 89, page 117. This should be applied night and morning, the pills being taken at the same time, and the general diet and regimen being such as tends to invigorate the constitution. No leeches should be applied here, as they would certainly aggravate the disease, though I have known such a treatment pursued by medical men, from not distinguishing chronic inflammation of the eyes from the active inflammation.

Sometimes an acute inflammation of the eyes leaves behind so great a degree of weakness in those organs, that their vessels remain enlarged, and full of red blood, and are altogether very weak and irritable. In such a case, the active inflammation has terminated in one that is *chronic* or passive, which will be most speedily removed by the use of mildly astringent and tonic medicines, combined with mercurial alteratives, as just recommended.

A drop of the wine of opium, dropped into the eye night and morning, is also a valuable remedy in indolent inflammation of the organ, especially if there be a great deal of soreness and irritation present. This medicine made a great noise when first brought into notice, but it has of late unjustly lost much of its reputation from having been used in acute inflammation of the eyes, to which state it is not applicable.

OF INFLAMMATION OF THE INTESTINES.

This disease is denoted by acute pain in the abdomen, increased upon pressure, and shooting in a twisting manner around the navel; by obstinate costiveness; tension of the abdomen; tenesmus, or vomiting, &c. as the inflammation happens to be in the superior, or inferior portion of the intestines; the vomiting being generally bilious, dark coloured, or fetid. Fever likewise attends, with a quick, hard, contracted pulse, great prostration of strength, and high coloured urine.

The disease either gradually abates and goes off, or terminates in ulceration or gangrene. It is often attended with con-

siderable danger, and may terminate in gangrene in the space of a few days, and sometimes of a few hours, from its commencement. This event is marked by a sudden remission of the pain, sinking of the pulse, shrinking of the features, suppression of urine, hiccup, and distention of the belly. If the symptoms appear to yield to the means employed, the pain abating gradually, natural stools being passed, and the pulse becoming firm and equal, a favourable termination may be expected. A copious discharge of loaded urine, and an universal perspiration, are favourable symptoms.

The suppression of perspiration, by the application of cold to the feet, or exposing the body to cold when over heated, &c.; acrid or irritating substances introduced by the mouth; obstinate costiveness; and violent passions of the mind, are the *most frequent causes*. It is most apt to occur at an advanced period of life, and is very liable to a relapse.

It is *distinguished* from colic by its being accompanied with fever, and a quick, hard, small pulse, and by the pain being increased on pressure,—symptoms which do not occur in colic.

In inflammation of the stomach, the pain is seated higher in the region of the abdomen, and is of a peculiarly burning kind; the vomiting and hiccup are more severe; and the dejection of mind, and prostration of strength much greater.

TREATMENT. Blood-letting is one of the chief remedies in this disease, and should never be neglected. It ought to be employed early and freely, according to the stage of the complaint, and the strength and age of the patient. In the commencement, blood should be drawn from the arm, and the operation be repeated to the second, third, or fourth time, at intervals of a few hours, according to the severity of the symptoms; it being always remembered that the abstraction of a certain quantity of blood within a short period, is invariably to be preferred to withdrawing the same quantity at a long period. Indeed, two pints of blood drawn within twelve hours will frequently be of much greater service in acute inflammations, than three or four pints taken in three days. The application of fourteen or twenty leeches to the abdomen, should immediately follow the general bleeding, and be repeated as the symptoms may require. At the same time purgative medicine must be administered, it being of much importance in this inflammation. Castor oil, or a composition of salts, as No. 27, or 28, page 103, may be given every three hours till it operates freely. But it is worthy of especial attention, that, in inflammation of the bowels, and other organs within the abdomen, the strongest purgatives will often fail of any effect, until the

inflammation is in some measure subdued by the other remedies employed. In such cases, obstinate constipation generally attends, and there is a danger lest the attention of the medical attendant, and the patient's friends, should be too exclusively directed to the importance and removal of this symptom. I have known even physicians lay the entire stress of the case upon the unconquerable constipation, and direct all, or a very principal part, of their treatment, to its removal, by the use of purgatives and clysters, to the neglect of free and continued blood-letting, and the other means herein recommended. In consequence of which the patients died, and when opened, extensive ulceration and mortification presented themselves. The fact is, that the constipated state of the bowels depends upon the inflammation, which must be subdued by the use of the lancet, and of calomel and opium, before it can be overcome; and, therefore, to treat a patient in this constipated state, complaining of great pain within the abdomen, chiefly or entirely with purgatives, clysters, the warm bath, and quicksilver, would be a dangerous and very bad practice. Nevertheless, the purgative medicine ordered above should be given, for though it will not succeed alone, it will assist in obtaining a free action of the bowels, a change much to be desired, as proving and perpetuating the resolution of the existing inflammation.

Should the vomiting be continued, and severe, it may often be allayed, so as to admit of the effectual administration of internal medicines, by giving the effervescing saline draught, No. 24, page 102, occasionally, or by the employment of the means pointed out under the article on inflammation of the stomach.

The purgative clyster, No. 8, page 97, may be frequently injected; and the warm bath, together with warm fomentations, are very proper. Bladders filled with warm water should be laid over the whole surface of the abdomen; and when the general excitement has subsided, and the disease seems to be giving way, a large blister should be applied to that region.

But there are few remedies more powerful in subduing acute inflammation, both within the abdomen and chest, than calomel combined with opium, especially after the free employment of venesection. Indeed, this composition is a remedy of great power, and universal application, in acute inflammation of all internal organs, and membranes of importance. It is of the first consequence in inflammation of the brain, lungs, stomach, and liver, in croup, and in, what is erroneously called, water in the head. Dr. Hamilton, of Lynn Regis, in Norfolk, was one of the first physicians who made known its remarkable power

in such diseases; and the late Dr. Armstrong, of London, has well observed, that so great is its efficacy in many such cases, that it deserves to be written in *letters of gold*, and always to be borne in mind by medical practitioners. Sir Astley Cooper, in speaking of inflammation generally, says, "the treatment of inflammation has been improved of late, by exhibiting calomel and opium." I should, therefore, never trust to blood-letting, as the chief remedy in the active inflammations just noticed, but invariably combine with it the administration of calomel and opium. In administering opium in acute inflammation, the dose must always be large enough to diminish the sensibility, and lessen the arterial action, without any previous excitement: in *small doses* it may here do harm by its stimulant effects.

Take of calomel, and the best opium, of each, fifteen or twenty grains; tartar emetic, two grains and a half; conserve of hips, a sufficient quantity to form the ingredients into a mass, to be divided into ten pills. One may be taken directly, after a full bleeding, and repeated every second, third, fourth, or fifth hour, according to the urgency of the symptoms.

In the less severe cases of inflammation of the bowels, the use of these pills, together with a few leeches to the abdomen, a blister, purging medicine, and a proper diet, will usually be quite sufficient to remove all complaint.

Quicksilver was formerly a favorite medicine in this disease, no doubt from its supposed superior power of finding a passage through the bowels, when nothing else would pass; but as the inflammation is the cause of the constipation, and the latter symptom is only effectually to be overcome by subduing the former, this mineral can be of no use, and no physician of judgment now trusts to it.

The diet should be the same as directed for inflammation of the eyes, and inflammatory fever.

OF INFLAMMATION OF THE LARYNX.

The *larynx* is the head or figured part of the windpipe, and is the organ of voice. It is formed of cartilage, that it may stand firm and uncompressed, either by the passage of the food, or by the weight of the outward air.

This part is subject both to acute and chronic inflammation. The chronic inflammation sometimes forms a variety of consumption, (see page 486,) and the acute inflammation of this organ is of a most dangerous character. Happily it is not a common complaint, and rarely occurs before puberty.

The disease sometimes commences like an ordinary sore

throat attended with hoarseness. Its chief *symptoms* are, pain in the upper and fore part of the throat, increased on pressure, a sense of stricture in the same part; harsh cough; difficult rather than painful swallowing; voice at first acute, then thick, hoarse and whispering, and at last completely suppressed; fever, and quick and laborious respiration.

The difficult respiration and the inadequate supply of air do not long continue without very visibly affecting the appearance of the patient: great anxiety is depicted upon a pallid countenance; the lips become of a leaden hue; the eyes protruding and watery; the pulse quick and feeble, and the heat of the surface of the body diminishes. The patient is restless and apprehensive, and often feels on the point of suffocation. If he begins to dose, he soon starts up in a state of the greatest agitation, gasping for breath.

Paleness and lividity of the complexion, and lethargy or stupor, are symptoms indicative of great danger.

An advancing period of life is a frequent *cause* in those who have suffered much from indigestion, or from intemperance, or anxiety. Exposure to cold or wet is often the exciting cause of the malady.* It affects chiefly those who are liable to ordinary sore-throats.

The age of the patients ordinarily attacked with this complaint, which is much beyond that of puberty, with the severity and rapidity of the symptoms, especially the laborious respiration, extreme anxiety, and sense of suffocation, clearly *distinguish* the disease from all others.

Treatment. A remarkable result of this inflammation, is a serous effusion into the cellular tissue beneath the mucous membrane of the larynx, which greatly augments the danger, and the difficulty of cure or relief. Hereby the opening of the windpipe may be so contracted as speedily to cause death, from strangulation; but death much more commonly occurs from the blood becoming gradually depraved, in consequence of the extreme difficulty of inspiring air. General blood-letting, leeches to the palate and tonsils, frequent doses of calomel and opium, after a free evacuation of the bowels, are the principal means of relief. In having recourse to general blood-letting, we must be guided by the age of the patient, the appearance of the complexion, and the stage of the disease. It has not been found of much service in elderly persons, and certainly not when the disease has continued for several hours, or in broken constitutions. In all cases leeches to the palate and tonsils should be tried, and a

* The illustrious American, General Washington, died of this complaint, which came on in the night of a day in which he had been exposed to rain. It proved fatal within twenty-four hours.

pill containing two grains of calomel, three of James's powder, and a quarter of a grain of opium, be given every second or third hour.

Emetics are not appropriate, and blisters are of doubtful efficacy.

The operation of *bronchotomy*, that is, making an opening into the windpipe, promises to be of eminent service in this malady, and should not be delayed beyond a few hours, if the laborious respiration is extreme, and the symptoms do not yield to the general remedies.

OF INFLAMMATION OF THE LIVER.

An inflammation of the liver is denoted by tension, soreness, and pain in the region of that organ, with pain about the right shoulder, difficulty of lying on the left side, and a short, dry cough.

If the disease is very acute, it commences with the ordinary *symptoms* of chilliness, succeeded by heat, frequent, hard pulse, and a furred tongue; the bowels are irregular, mostly costive; the evacuations little tinged with bile; the urine often saffron-coloured; the skin dry; the thirst extreme; with occasional sickness.

When the symptoms are most severe, and we have reason to suspect that the disease is confined to the membranes, the duration is often short, and the termination is in most cases favorable. But when less active, and seated in the substance of the liver, it generally tends to suppuration; and if the convex side of the liver be the part affected, a tumour is visible externally, the cough becomes aggravated, and there is a difficulty of breathing. If adhesions have preceded the suppuration, the pus points to the skin, and the abscess opens on the surface; but if it break internally, it generally proves fatal by inducing a hectic fever, though sometimes, in consequence of fortunate adhesions, the abscess discharges itself into the hepatic duct, which terminates in the first intestine, and the pus (matter) is carried off by this channel.

This disease is usually divided into the *acute* and *chronic* inflammation of the liver, but as the second variety is what is popularly called a *liver complaint*, it will be treated of under that head, the affection now considered being the acute inflammation.

It is excited by all the usual *causes* of inflammation. People of a choleric and melancholic temperament are most liable to it; and it is far more frequent in hot than in cold or temperate climates. Exposure to the rays of a vertical sun, and to the

damps of the night in sultry climates, are two of its most frequent causes.

TREATMENT. The treatment proper is very similar to that laid down under the last article. Blood-letting is generally found serviceable at the commencement, and should be repeated as the violence of the symptoms requires, and the strength of the constitution allows. Purgatives of Epsom and Glauber's salt, and of calomel, as No. 120, page 125, should follow, and are considered particularly efficacious.

After these remedies have been employed, the calomel and opium pills prescribed under inflammation of the intestines, should be given every three hours till the disease gives way, when they may be administered at longer intervals of four or six hours. In sultry climates, where the disease is met with in its most acute forms, and where it often runs on with an astonishing rapidity, much larger doses of calomel than are contained in those pills must be given. Here four, five, or six grains, with a quarter or half a grain of opium, or three grains of Dover's powder, will frequently be required every second or third hour, until the symptoms are relieved, when it should be continued in smaller quantities. Professional men practising in hot countries, place more dependence on the powers of calomel in this complaint than on any other means whatever.

Hot fomentations, the warm bath, and blisters, are proper; and the cooling febrifuge medicines recommended for inflammatory fever may likewise be employed with advantage.

The diet should be mild and small in quantity, the same as advised for the two preceding inflammations.

OF INFLAMMATION OF THE LUNGS.

This inflammation is denoted by pain in the chest; constant and anxious difficulty of breathing, alleviated by an erect position; tumid, purple face or lips; distressing cough; a strong, hard, and frequent pulse; and fever. These symptoms vary considerably in different cases. The difficulty of breathing is the most constant symptom, and becomes considerable in all cases as the disease advances. The pain is sometimes peculiarly acute, and at other times heavy and dull, and it may be either in the right or left side, or under the breast-bone, collar-bone, spine, or shoulder-blades. The cough is often very distressing, being in some cases dry, in others attended with spitting. The pulse is very hard and strong; the thirst considerable; the tongue often dry, white, and rough.

When the determination of blood to the head is very great, and marked by stupor in the commencement of the disease, the

symptom is extremely unfavorable. Delirium is likewise a very dangerous symptom.

Inflammation of the lungs may exist with little or no pain, when the real nature of the case may be known by the constant difficulty of breathing, painful cough, presence of fever, and sometimes by the nature of the expectoration. In many cases this has an appearance quite characteristic: it is remarkably *glutinous*, and when received into a flat and open vessel, unites into so viscous and tenacious a mass, that we may turn it upside down without the expectorated matter being detached; and if we shake the vessel its contents vibrate like jelly, though in a less degree.

When inflammation of the lungs terminates favorably by a distinct crisis, the most common is a red or white sediment in the urine; and we should distrust any other, unless this also occurs at the same time. Next to this deposition, a sweat and moderate diarrhœa are the most common forms of crisis. A copious expectoration of mucus is also sometimes critical.

The most *common causes* are, exposure to cold; violent exercise; violent coughing; acrid vapours and dust received with the breath; to which may be added every thing which conduces to a full habit, as luxurious living, indolence, repelled eruptions, suppressed excretions.

The strong and plethoric, who use much exercise, and readily digest their food, are most subject to it; and it is generally the more frequent in the colder, moister, and more changeable weather. It is, however, common and fatal in old persons, and children are very subject to it. It is said that about three-fifths of the children that die in the hospitals between birth and the conclusion of the first teething, die of this disease, and chiefly in a latent or concealed state.

No inflammation is more easily renewed in those who have formerly laboured under it.

It is usual in systems of physic, to lay down the rules for *distinguishing* inflammation of the lungs from that of the pleura, heart, and membrane covering the heart, called pericardium; but the symptoms, causes, and treatment are so nearly alike in all, as to make it unnecessary to treat of them distinctly in a popular work.

Pleurisy, or inflammation of the pleura, is, perhaps, generally attended with more acute pain than inflammation of the lungs: and in an inflamed state of the heart, all the symptoms are commonly more severe.

Treatment. The first remedy had recourse to in this disease should be blood-letting, both by the use of the lancet, and cupping, or the application of leeches. As in inflammation

of other vital organs, the bleeding at the commencement should be prompt and copious, the quantity first drawn being rarely less than eighteen or twenty ounces, and the operation being repeated in ten or twelve hours, or sooner if the symptoms are not much relieved. Immediately after the general bleeding, the cupping glasses, or from ten to twenty leeches, must be applied over the chest. The laxative draught, No. 28, page 103, should likewise be given once a day, but purging is here of no advantage. The cooling febrifuge mixture, No. 81, page 115, may be advantageously employed, every three or four hours. Blisters to the chest are useful after the fever has been subdued by the above means.

But the administration of calomel and opium, as advised under inflammation of the bowels, (page 503) will also be found of eminent utility. As an auxiliary to blood-letting it is invaluable, and both conjoined will often succeed in curing the disease, when it would prove fatal by our trusting alone to the former remedy.

The administration of tartar emetic is of great service in all inflammations occurring within the chest. It is trusted to alone in these complaints, by many French and Italian physicians.* M. Peschier, of the Canton de Vaud, has trusted entirely to large doses of this substance, in such cases, for many years past, and, according to his report, with admirable success. He does not bleed, or blister, but immediately commences with giving the patient a table-spoonful of the following mixture, every two hours, in a tea-cupful of barley-water, or tamarind tea.

Take of emetic tartar, fourteen grains; water, six ounces; syrup of saffron, two drachms.—Mix.

In general, the quantity of emetic tartar ordered in this mixture should be increased three grains a day, till the patient takes twelve, fifteen, or twenty grains during the twenty-four hours: the dose of the mixture being still a table-spoonful every two hours. If much tendency to sweating occurs, three or four drachms of the sweet spirit of nitre may be added to the mixture; and should there be much uneasiness, and sleeplessness, a drachm of tincture of opium may be mixed with it. The following are the usual effects of the medicine: the patient generally vomits after the second or third dose of the first mixture, and afterwards it either acts on the bowels, or produces no other sensible effect than that of mitigating quickly the symp-

* Its value as a powerful anti-inflammatory remedy "is now established by the united experience of the most distinguished British and continental practitioners. In our own hands, we have seen the most surprising effects produced by it." *Cyclopædia of Practical Medicine, vol.* ii. *p.* 806—1833.

toms of the disease. M. Peschier remarks, that large doses of this article produce much less vomiting than small ones, which always gives rise to great distress without beneficial results. I am very favorable to this plan. When we consider that a free expectoration is the means which nature often adopts for carrying off inflammation within the chest, and that the tartar emetic is a powerful expectorant, as well as corrector of inordinate vascular action, the plan appears evidently rational and well founded. I should, however, in general, prefer combining the tartar emetic with the calomel and opium above recommended, more especially in the severer cases.

As soon as we have obtained by the use of emetic tartar, some amelioration of the symptoms, although but slight, we may in general be assured that the continuation of the remedy will effect complete resolution of the disease, without any fresh relapse; and it is in regard to this point more particularly, that the greatest practical difference between the emetic tartar and blood-letting consists. By the latter measure, we often obtain a diminution of the fever, of the oppression, and the bloody expectoration, so as to lead both the patient and the attendants to believe that recovery is about to take place: frequently after a few hours, however, the unfavorable symptoms return with fresh vigour; and the same scene is not uncommonly renewed, often five or six times, after as many successive and large bleedings. On the other hand, these renewed attacks, under the use of the emetic tartar, are not witnessed.

The vapour of warm water should be inhaled frequently.

During the whole course of the complaint, the patient should be confined to bed, and the room be kept quiet, and moderately warm. All kinds of animal food and heating fluids must be avoided, and the diet consist of light vegetables, with diluting drinks, as barley-water, tamarind tea, &c. On recovering, constant care must be taken to guard against cold, and any irregularity likely to occasion a relapse, a circumstance very apt to take place.

Elderly persons, and those who have greatly weakened their constitutions by excesses, are sometimes attacked with *a spurious inflammation of the lungs*, which will not bear blood-letting, or any other means of active depletion. The patient, in this case, is hot and cold alternately, feels giddy, and complains of an acute pain in the head, especially when there is a teazing cough. He rejects all fluids, sometimes from paroxysms of coughing, and sometimes without; the urine is turbid, and of a deep red. The patient breathes quick and with difficulty:

complains of a general pain throughout the entire breast, and as he coughs discovers a wheezing to the attendants. The cheeks and eyes appear slightly inflamed; the pulse is small, often intermitting; and lying low, or on one side, is peculiarly distressing.

The *treatment* of this spurious inflammation of debilitated subjects, consists in administering emetics, and stimulating expectorants of squills, and gum ammoniac, &c. as combined in the compound squill pill, from five to eight or ten grains of which may be given three or four times a day, either alone, or united with half a grain of calomel. When the inflammatory symptoms appear somewhat severe, the addition of the calomel should never be neglected.

The pills of calomel and opium, before prescribed, are of much service in this affection, as they have the power of removing the congestion existing in the lungs, without weakening the patient. The mixture of tartar emetic also, as above recommended, is likely to prove of great benefit here, from its tendency to promote spitting, and occasional vomiting, which greatly relieves the lungs, and often cuts short the complaint. As the present variety is a disease of old or enervated persons, the tartar emetic may be used in less quantity than there ordered; for example, ten or twelve grains may be put into the mixture, instead of fourteen or twenty.

Blistering the chest is often of great advantage, but bleeding should be very cautiously, perhaps never employed; for this complaint consists rather in congestion within the chest than in positive inflammation. It is the suffocative cough of some authors, and, as was before remarked, is found only in the old or infirm.

The food must be mild, but somewhat more nutritious than can be allowed in true inflammation of the lungs.

OF INFLAMMATION OF THE STOMACH.

Burning pain at the pit of the stomach, increased on swallowing; rejection of every thing swallowed; hiccup; with oppression and dejection of mind, and high fever, are the *symptoms* denoting this disease. The pain is extremely acute, but is not always confined exactly to the region of the stomach, for it sometimes extends as low as the false ribs, and often shoots to the back. It is always much increased by even the slightest external pressure, and the vomiting is a more constant symptom than the hiccup. The pulse is frequent, small, contracted, hard, and sometimes intermitting. The thirst is urgent, and the bowels costive.

The depression of strength is more sudden and general than in any other inflammation. The patient complains of anxiety and anguish referred to the pit of the stomach, and actual fainting sometimes occurs.

The *causes* are the same as those that give rise to inflammation of the bowels, which have already been described. There is, perhaps, no cause of this disease so common as suddenly checking perspiration by drinking cold fluids.

Spasm of the stomach is *distinguished* from inflammation by its being unattended with the sudden sinking of strength above noticed, by the pulse being natural, and by there being little or no increase of pain on receiving any thing into the stomach, or on pressure.

TREATMENT. The treatment so nearly resembles that laid down for inflammation of the bowels, as to make it unnecessary to say much more here than what has already been said under that head. Blood-letting, calomel and opium, blisters, the warm bath, and clysters, are the chief remedies.

There is no case of inflammation in which bleeding is carried to a greater extent than in that of the stomach. Recourse must be had to it immediately the disease shows itself, and if the symptoms do not yield, it must be carried as far as the habit will bear. And so far from only letting blood when the pulse is full and strong, the smaller and weaker it is, generally speaking, copious and early blood-letting becomes the more necessary. After a large quantity of blood has been taken away, the inflammation will often suddenly disappear, but we must be prepared for a recurrence of the disease, which, to a greater or less extent, almost always happens. One of the calomel and opium pills (page 506) must be taken, at the same time, every three hours.

Purgative medicines are not applicable in the present case, but purgative clysters, as No. 8, page 97, may be frequently injected with advantage. When, however, the inflammation arises from over-distention of the stomach, the patient is often tormented with ineffectual efforts to vomit, in which case, endeavours should be made to relieve the stomach by the exhibition of purging medicine, since emetics are invariably inadmissible.

The warm bath and warm fomentations should be used freely; and after the excitement has been reduced by bleeding, &c. a large blister should be laid over the region of the affected organ, and repeated to the third or fourth time, if necessary.

The patient may, with advantage, drink freely of marsh-mallow tea, barley water, or gum water; and sometimes orange

juice, diluted with water, forms an excellent drink in this disease.

There is a CHRONIC INFLAMMATION of the stomach *(chronic gastritis)* which merits serious attention, since it is a frequent complaint in this country, and is often mistaken for ordinary indigestion. In many instances the first *symptoms* are—acidity, flatulence, a sense of heaviness and oppression after eating, eructations, and transient slight pains in the region of the stomach. As the disorder advances, the pit of the stomach becomes somewhat tense, and sore to the touch, the distress becomes more and more troublesome after eating, and nausea or vomiting may occur an hour or two after taking food. The pain in the stomach is generally confined to one spot, and a sensation of pressure against the diaphragm or midriff, as if by a large ball, is occasionally experienced by some patients, whilst others complain of a feeling, as if a bar were fixed across the stomach, preventing the passage of food or drink into the stomach. In some instances, a fluid resembling the white of egg is copiously thrown up from the stomach, and many suffer much from water-brash. The pulse is generally quick and tense; there is much muscular prostration, and great indisposition both to bodily and mental exertion.

All the usual *causes* of indigestion will give rise to it, or it may be the consequence of the acute form.

It requires in many instances a discerning eye to *distinguish* this complaint from indigestion, the symptoms of the two affections so nearly resemble each other. When, however, the patient feels considerable pain *in a particular spot* in the region of the stomach, followed by vomiting soon after eating, and a severe feeling of *pyrosis*, or water-brash, attended with a vermillion redness and tenderness of the tongue, especially of the sides and tip, and throat, and the individual becomes much weakened and emaciated, we may reasonably suspect the existence of *chronic* inflammation of the stomach.

The proper *treatment* of this affection demands a very strict attention to diet, scarcely any thing being allowed but the blandest, and certainly nothing but the most digestible, articles of diet, such as barley or gum water, thin gruel, fluid preparation of sago, arrow-root, tapioca, boiled milk, and animal jellies. Good plain biscuit and rusks soaked in water, or in milk and water, may be permitted, but no solid articles of food, at least in the beginning. See the remarks at page 483.

Leeching the pit of the stomach is sometimes useful, and also the application of a blister over that part, or friction with the

tartar emetic ointment. I think very favorably of pills of the compound extract of sarsaparilla, or those marked No. 104, page 121; and, after preparatory treatment, of the oxide of bismuth, which should be taken united with ipecacuanha powder and extract of hop. Ipecacuanha I consider a particularly appropriate and valuable medicine in this disorder, and it may generally be given very early, if simply combined with soap. Sometimes the patient will derive considerable benefit from a pill, composed of half a grain, or a grain, of blue pill, combined with three or four grains of extract of henbane or hemlock, which may be given every night, and repeated in the day, if the pain or general irritability calls for it. Dr. Eberle, of Philadelphia, recommends (*Treatise on the Practice of Medicine, vol.* i. *p.* 197, 1831) a trial of "a weak emulsion of the balsam of copaiva, an article which, (he says,) I have used in a few well-marked cases of this disease with considerable benefit:—

> Take of balsam of copaiva, one drachm and a half; gum arabic powder, two drachms; syrup of lemon, half an ounce; water, eight ounces; laudanum, thirty drops.—Mix, and take a tablespoonful twice daily."

The bowels should be kept regular by means of clysters of oil and warm water.

OF INFLAMMATION OF THE THROAT, OR QUINSY.

The Quinsy is an inflammatory affection of the throat, denoted by swelling and florid redness of the back part of the throat, with difficulty of swallowing and fever.

The disease generally begins with an uneasy sense of tightness about the throat, and difficulty and pain in swallowing. On inspecting the back part of the mouth, the parts, as far as the inflammation extends, appear swelled, and of a more florid red than natural; and here and there, particularly on the tonsils, small white or yellow specks are often observed. While these remain of a light colour, and the pulse continues sufficiently strong and full, they never indicate danger. As the disease advances, the difficulty of swallowing and breathing becomes greater, the speech grows indistinct, the dryness of the throat, and the thirst, increase, the tongue swells, and is much furred, and the pulse is full, hard, and frequent. When the *symptoms* are considerable, the whole face partakes of it, the eyes are inflamed, the cheeks florid and swelled, the breathing is performed with difficulty, and the patient is obliged to be supported

in nearly an erect position to prevent suffocation. Even delirium sometimes comes on.

The inflammation is generally confined to the parts which can be brought into view by opening the mouth; it sometimes, however, extends along the œsophagus, or gullet, and occasionally to the windpipe. In the former case, the difficulty and pain of swallowing is very great; in the latter, the breathing becomes peculiarly difficult and distressing. In both, the danger is very great. Moderate fever, free respiration, swallowing not much impeded, the inflammation being of a vivid red colour, universal but gentle sweat, and a copious spitting, or moderate looseness, coming on about the fifth day, are very favorable symptoms.

It is most apt to attack the young, robust, and plethoric; and is most frequent in spring and autumn. Cold, particularly if alternated with a high temperature, or partially applied, especially if applied to the seat of the disease, is the *chief exciting cause*.

It is usually a mild disease. It is only in the highly predisposed that it assumes its more alarming forms.

It is readily *distinguished* from the putrid sore throat, since, in the latter disease, the redness of the tonsils is of a darker crimson colour, and covered with spreading ulcerations, and sloughs of an ash colour, while the fever is of a low typhous character

An acute inflammation of the *larynx*, or top of the windpipe, is sometimes met with, which may, by ignorant persons, be confounded with inflammation of the throat. See page 506.

Treatment. One of the first things to be done in this disease, is to administer an emetic of tartarized antimony, as No. 29, page 103; and it may be repeated to the second or third time, in the course of twenty-four or thirty-six hours, should the symptoms require it. Emetics given early, and they should never be neglected when the symptoms are considerable, often put a stop to the disease more speedily and effectually than any other remedy, and seldom fail to bring considerable relief. Patients labouring under severe attacks of this disease have been snatched apparently from the jaws of death by an emetic. It is sometimes employed with advantage even after the formation of an abscess; for should the surgeon be unable to reach it, the exhibition of an emetic, if it is ripe, will almost always occasion its bursting.

After this, cooling purgatives should be given, as No. 28, page 103, and leeches be applied to the external surface of the throat. If the fever runs very high, it will be proper to take blood from the jugular vein, or arm. Under all circumstances,

the vapour of warm water should be freely inhaled several times a day. It may be drawn in through the spout of a tea-kettle, or more effectually by the instrument termed an inhaler. The use of gargles is likewise proper. A very good gargle may be made by mixing three drachms of tincture of myrrh with seven ounces of infusion of roses; or by adding half a drachm of muriatic acid to seven ounces of barley water. See also No. 57, page 110. If suppuration is unavoidable, the gargle should be mild, and used warm, and in large quantity, as the object in such a case, is to promote a favorable suppuration. A very good gargle, for this purpose, may be made by boiling a few figs and linseed together in water, to which may be added a little mucilage of gum arabic.

A stimulant embrocation should likewise be rubbed on the neck and throat, as No. 45, page 106; and a large blister be applied near the seat of the disease. When the first blister fails, a second ofter succeeds. But should the quinsy be very severe, and the fever run high, with a hard, quick pulse, the blisters and embrocations ought to be delayed till the fever is reduced by the employment of blood-letting, and emetics; or otherwise the irritation occasioned by these remedies would be likely to increase rather than diminish the inflammation.

Febrifuge medicines which determine to the surface of the body are also proper. One of the best of these is James's powder. Four grains of it may be taken twice or thrice a day, made into a pill with conserve of hips. Or the diaphoretic draught, No. 26, page 102, may be used in its stead.

When the swelling in the throat is so great as to threaten suffocation, the enlarged tonsils should be scarified by the surgeon, and if this fails to afford relief, the operation of making an opening into the windpipe (called tracheotomy) ought not to be delayed. In such cases, the most alarming symptoms are often the consequence of impeded respiration, and will disappear when a free passage is given to the air. This operation is not severe or dangerous.

In very severe cases, all kinds of animal food and fermented liquors must be avoided, and the diet be mild, spare, and diluting, as recommended for inflammatory fever. Plentiful dilution by drinking of warm barley-water, thin gruel, and the like, is in all cases advisable. Should swallowing be wholly interrupted, the patient must be nourished by nutritive clysters of mutton broth and bread, or decoction of barley, oatmeal, and arrow-root, till by the most active means the inflammation of the throat is reduced.

When the quinsy has been severe, it is often succeeded by a considerable degree of debility. Nourishing food, and the

moderate use of wine, are generally sufficient to restore the strength; but if the tendency to the disease has wholly subsided, a cold infusion of bark will be very useful. The relaxation of the throat left after the attack has gone off, may be removed by the use of one of the astringent gargles above mentioned.

In the slight cases of quinsy so often met with, the use of the volatile liniment, No. 45, page 106, with an astringent gargle, No. 56, or 57, page 110, a little purgative medicine every other day, as No. 74, page 114, and five grains of James's powder at night, will be sufficient to carry off all complaint. Should the disease be growing severe, a vomit of tartar emetic ought to be taken immediately.

I think I cannot close this part of the present article better, than with an extract from the observations of the late Dr. Baillie on this disease.

"I have but one observation," says he, "to make with regard to this disease, which is of some little importance. It is usual to endeavour throughout the course of it to prevent suppuration from taking place, by the repeated application of leeches under the angles of the lower jaw. It is certainly very desirable that suppuration should be prevented, and that inflammation of the tonsils should gradually subside by resolution. I have found, however, by experience, that suppuration is by such means very often not prevented, but only that inflammation proceeds more slowly to this issue. Hence the patient suffers for a considerably longer time; and the suffering in this disease is often very great. If, therefore, one or two applications of leeches do not lessen materially the inflammation of the tonsils and palate, I should recommend the progress of the inflammation to be encouraged by the inhaling of warm vapour into the mouth, and the application of poultices to the external fauces. In this way the disease will go through its progress more quickly, and the patient will suffer much less." *Dr. Baillie's Posthumous Writings, p.* 175.

Many persons are much distressed, almost every winter, by a sort of CHRONIC or HABITUAL SORE THROAT, which demands attention in this place, both on account of the painful nature of the malady, and because it is much more within the control of proper medical assistance than such patients are generally aware of. With some persons it proves habitual, continuing, with greater or less severity, almost throughout the winter, while others are attacked with it two or three times, or oftener, during that season, for many years successively. This is not a sore-throat of an inflammatory character, but one which evidently depends upon a weak and relaxed state of the parts, combined with weakness and disorder in the general system. Such being the real nature of the complaint, it is manifest that the means most likely to prove beneficial and curative, are those which are calculated to invigorate the constitution, and parts about the throat, and at the same time to correct the existing disorder in

the digestive organs. I would, therefore, advise the patient to take one of the pills, No. 93, 94, or 95, page 104, thrice a day, joining with them the use of as much air and exercise as possible, early rising, and a correct diet, such as is advised under *Indigestion*, at page 480. The state of the bowels should claim particular attention. If the above pills do not keep them gently open, one of those, marked No. 100, or No. 101, ought to be taken every other night, or as occasion may require. At the same time, the flesh brush must be used to the whole of the external part of the throat, night and morning, for ten minutes at each time; and, if necessary, the throat may be gargled, once or twice a day, with the following decoction, which is often very useful in relaxed uvula, and all sore-throats depending on relaxation.

Take of pounded galls, three drachms; of boiling rose-water, ten ounces. Infuse for three hours. Then filtrate, or pour off the liquor; and add, of alum, three drachms; of spirit of nutmeg, or horse-radish, or pimenta, three ounces. This forms the gargle.

The frequent employment of the flesh brush is of much service; indeed, some persons have entirely got the better of a strong disposition to frequent attacks of the present complaint by a daily use of this means alone.

I am fully persuaded a proper regard to these means will rarely, if ever, fail to be extremely beneficial, and in many cases will be attended with striking and permanent benefit.

It is not necessary to treat of inflammation of the bladder, kidneys, or womb, separately. Their causes and symptoms are, for the most part, the same as in inflammation of the intestines, and their treatment does not differ materially from that recommended for intestinal inflammation.

OF INSANITY, OR MENTAL DERANGEMENT.

Insanity is well known to mean unsoundness of mind. In referring to a general division, for the sake of perspicuity, we may remark, that there are two states of insanity; the one state is characterized by an unrestrained behaviour; by an irritability which urges on the patient in an extravagant pursuit of something real or imaginary, to the ruin of himself, or annoyance of his friends; and ultimately leads him, if opposed in his disordered wishes, to acts of extreme violence. That is what many physicians call MANIA or MADNESS; and others, the HIGH or STHENIC FORM of insanity.

The other state is marked by an unusual lowness, sometimes amounting to despair, a loathing of life, and every thing con-

nected with it, accompanied too often by an uncontrollable effort of the patient to rescue himself, by his own hand, from his real or imaginary distresses. This is the MELANCHOLY of some authors, and the LOW or ASTHENIC FORM of insanity of others.

Mental derangement is generally divided by medical men into MADNESS and MELANCHOLY, and I shall say a little on each of these heads separately. But first it will be advisable to make a few remarks upon certain points which are equally applicable to both these forms of insanity.

It is very commonly supposed that the intellect or reasoning faculty is chiefly or even solely disordered in persons afflicted with mental derangement, but this is a great mistake, for many cases are to be met with in which it consists in a morbid perversion of the moral affections exclusively, and without any perceptible lesion of the intellectual faculties. Pinel, the late able physician of the Bicêtre, a large lunatic asylum in Paris, was the first person who distinctly noticed this fact; and Esquirol, a Parisian physician who at the present day practises extensively in lunatic cases, and who possesses a superior judgment, says, *(Diction. des Sciences Medicales, tom.* xvi.*)* "This moral alienation is so constant, that it appears to me to be the proper characteristic of mental derangement. There are mad men in whom it is difficult to discover any trace of hallucination, but there are none in whom the passions and moral affections are not disordered, perverted, or destroyed. I have in this particular met with no exceptions." *

In conformity with this view of the subject, the following divisions of insanity (extracted from the *Cyclopædia of Practical Medicine, vol.* ii. *p.* 826, 1833) appear to me peculiarly just and valuable:

"1. *Moral insanity*, or madness consisting in a morbid perversion of the natural feelings, affections, inclinations, temper, habits, and moral dispositions, without any notable lesion of the intellect or knowing or reasoning faculties, and particularly without any maniacal hallucination.

"2. *Intellectual insanity*, or madness attended with hallucination; in which the insane person is impressed with the belief of some unreal event as of a thing which has actually taken place, or in which he has taken up some notion repugnant to his own

* "A return to the proper and natural state of the moral affections, the desire of seeing once more children or friends; the tears of sensibility; the wish manifested by the individual to open his heart and return into the bosom of his family, to resume his former habits, afford *a certain indication* of cure, while the contrary dispositions have been a mark of approaching insanity, or the symptom of a threatened relapse. This is not the case where there is merely a disappearance of the hallucination, which then only is a certain sign of convalescence, when the patients return to their natural and original affections."—*Esquirol, in Diction. des Scienc. Medicales, tom.* xvi.

experience and to common sense, as if it were true and indisputable, and acts under the influence of this erroneous conviction."

3. *Incoherent madness.* This is another well marked division, "in which the whole mind, if we may use the expression, seems to be equally deranged. The most striking phenomena in this form of the disease are the rapidity and disorder with which the ideas follow each other, almost without any discoverable connexion or association, in a state of complete incoherence and confusion. It is impossible to fix the attention of the patient long enough to obtain a reply to the most simple question. His understanding is wholly lost in the constant hurry of ideas which crowd upon him, and which appear to exceed the power of distinct utterance, while his habits betray a corresponding degree of restless activity and extravagance."

The *causes* of this disease are a changeable climate, subject to great atmospherical vicissitudes; extremes of heat and cold; intense study, especially where the efforts of the mind are directed more exclusively in one channel; intoxication; prostitution, (a twentieth part of the insane females admitted into the Salpetrière Hospital, at Paris, are previously prostitutes;) the excessive ascendency of the factitious passions, as self-interest, ambition, pride, avarice; the struggle between the principles of religion, morality, and education, on the one side, and the passions on the other; hereditary disposition; child-birth; menstrual irregularities; epilepsy, a fruitful source; the abuse of mercury, &c.

The passions and emotions most productive of this complaint are love, fear, fright, rage, ambition, reverses of fortune, and the greatest of all, domestic chagrin, or family dissension. The combination of moral and physical causes is much more commonly the origin of insanity, than either of them singly. Some medical men consider the moral causes to predominate far, in number and force, over the physical; others, look upon bodily disease as the chief foundation of the complaint in the generality of instances. In the great majority of instances that I have seen, considerable bodily disorder has been not only coincident with the mental malady, but its precursor.

Whether the derangement assume the form of madness, or melancholy, is owing rather to the constitutional disposition of the individual affected, than to the nature of the exciting cause; for the causes above noticed, are alike applicable to both forms of the disease, sometimes giving rise to one modification, and sometimes to the other.

The following is said to be a correct table of the proportion which the insane bear to the whole population, in the countries

named, and if so, it proves that mental derangement is much less frequent in Italy, than in the more northern countries.

	Population.	Insane.
Italy	16,789,000	3,441
France	32,000,000	32,000
England	12,700,000	16,222
Wales	817,148	896
Scotland	2,093,454	3,652
State of New York	1,617,458	2,240

It is undoubted, that the more tranquil a country is, and the less agitated by "the pride of life," the inordinate desires, and the many wants of civilization and refinement, the less frequent we find the present malady. Therefore in Turkey, Egypt, Russia, &c. the number of the insane is very small, and in France and England very large.

The *causes* of insanity do not always act directly on the brain; more frequently, on the contrary, they are preying on some organ at a distance; the nervous, sanguiferous, or lymphatic systems, the digestive organs, or the organs of generation, being the primary seats of the evil. M. Pinel, the distinguished French physician and writer on this disease, before mentioned, refers the *immediate cause*, in almost every instance, to a deranged condition of the stomach, and other digestive organs. It is here he supposes the disease to commence, and contends that the affection of the brain, and of the mental faculties, is subsequent to the symptoms of internal irritation, and altogether dependent upon them; an opinion which corresponds with the results of my experience.

The disease is either continued, intermittent, or remittent. A certain change in the countenance, with a sense of general lassitude; sleep; natural appetite; softness of skin; freedom of the secretions and excretions; and a return of moral feeling, are indicative of approaching recovery. This will be perfect, if, with the return of reason, the patient resumes his usual affections, habits, and general character. But if, on the other hand, the sleep, the appetite, the secretions and excretions, come back to their usual healthy standard, without a corresponding sanity of mind, the disease is likely to pass into a chronic state, or fatuity itself.

Cures are effected in about one in three cases. It is in the first month that there is the greatest probability of success. It would appear that in the first two years of insanity, the greatest number of cures are performed. That the medium curable period is somewhat less than a year. That after the third year there is not above one in thirty cured. The most favorable epoch of life for the cure of the disease is between the age of

twenty and thirty. After fifty there is little chance. Madness is more frequently cured than melancholy.

In all mental aberrations, if bodily indisposition is not apparent, the chance of cure is hereby diminished.

It has long been a current opinion, that insanity is a disease more common to our own country than to any other, but it appears to have no solid foundation. Dr. Burrows, of London, has collected a great deal of information on this point, and he considers, that the disease is not more frequent in England than in several of the neighbouring continental nations. From the table collected by Dr. Burrows it appears, that suicide is much more frequent in Paris, Berlin, and Copenhagen, than in London.

OF MADNESS.

The *principal symptoms* are, an altered and peculiar appearance of the eyes, protruding and wild; rapid and successive change of features; unusual vigour and uncommon agitation of the whole muscular powers; insusceptibility to extremes of heat and cold, and to the influence of contagious diseases; insensibility of the skin, stomach, and bowels, hence obstinate costiveness; absence of sleep; high bounding spirits; erroneous imagination, incessant talking, singing, shouting, &c.; obscene language and gestures; sometimes excruciating pain, denoted by frequent change of posture, beating the forehead, breasts, stomach, sides or belly; eructations of wind from the stomach of a very peculiar fetor; high coloured urine; delirium. The skin is dry, harsh, and cold, sometimes with partial, cold, and clammy perspirations; breath hot and offensive; hurried respiration.

The most common period of attack is between the ages of eighteen and forty.

Madness very frequently terminates in the opposite form, or melancholy. Chronic incurable derangement, or fatuity, embraces a large proportion of its subjects.

The *causes* are detailed above, and the distinction between this form of insanity and melancholy, may be readily perceived by comparing the symptoms of the one with those of the other.

Treatment. One of the first things to be done in all cases of insanity, under whatever form it may appear, is to separate the patient from his friends and home, as this separation is invariably conducive to recovery. Foreigners are more certainly cured in England than the natives; and strangers sent to Paris for treatment are more readily restored to reason than the inhabitants of that city.

The judicious exercise of the faculties conduces much to recovery. This must be done by exciting the patient's attention —by presenting new objects to their contemplation—by giving way, in some measure, to their hallucination. If by these means their confidence can be gained, the probability of cure is much increased. The passions also must be carefully managed. The proud and rebellious passions and emotions must be tamed and kept in subjection, while the timid and melancholy are to be dissipated by encouragement. It is sometimes proper to substitute a real for an imaginary grievance. Thus a melancholic is devoured with *ennui* in the midst of the pleasures and enjoyments of life. If we withdraw him from his usual habits, and impose on him real privations, he will then suffer real *ennui*, which will prove a powerful means of cure.

Travelling is often of extraordinary benefit; and so is active corporeal exercise. A farmer, at a distance from London, gained great repute for the cure of insanity, by taking his patients into the fields, and compelling them to draw the plough, a practice that proved of much service. Every maniac should have constant employment, especially in gardening or agriculture.

The clothing should be warm and comfortable; and the food prevented from being devoured with voracity. In the majority of cases, a plain and regular course of living is essential. Patients accustomed to wine ought not to be wholly debarred from it. When the symptoms of indigestion exist, a suitable diet must be enforced. When exhaustion is apprehended from a long continuance of high excitement, the most nutritious food should be given.

A principal object in the medical treatment is to procure for the patient sound and refreshing sleep, and the endeavours should be directed towards insuring it for many nights successively. If it can be insured by exercise and regimen, they will be the best means, but if not, soporific medicines should be given, but no opium, except in the form of muriate of morphia. Camphor, extract of henbane, and James's powder, combined in large doses, is frequently a valuable form for the purpose.

Take of camphor, from a scruple to half a drachm; spirit of wine, a few drops to dissolve the camphor; James's powder, six or eight grains; extract of henbane, twenty grains.—Mix, and divide into five or six pills, to be taken about seven or eight o'clock. Or the whole may be put into wafer paper, and swallowed as a bolus.

Camphor alone, in large doses, has been highly extolled as a remedy in this disease.

Purgatives are of considerable use, especially those which act

on the liver, and those which tend to produce the piles; such are combinations of calomel and jalap, and calomel with aloes. Four grains of calomel may be united with a scruple of extract of jalap, or with eight or ten grains of aloes. Maniacs require large doses of purgatives, and sometimes more than what is now ordered will be necessary. The warm bath, at about ninety-six degrees, every other day, is likewise sometimes very useful, but the cold bath rarely so. When, however, the patient is young, robust, and complaining of internal heat, the cold bath may sometimes be beneficial. The cold shower-bath is often a very useful remedy.

Strong and repeated emetics are often very efficacious, especially when the sensibility is greatly diminished, and torpor prevails. Setons, issues, or frequent blisters, are useful where there has been a sudden disappearance of some local disease, the head directly becoming affected. They are also indicated when there is apparent disease in the stomach, bowels, womb, &c. The extraction of a little blood occasionally, from the seat of pain, by means of leeches, or cupping, will often be useful; but the lancet should rarely be employed, and never, perhaps, should a very large quantity of blood be drawn off. Large bleedings have been too commonly employed in insanity, and with great and irreparable injury. Pinel was decidedly opposed to the abstraction of blood, and Esquirol is no great friend to it. Dr. Prichard advises great caution in resorting to it.—*Cyclopædia of Practical Medicine, vol.* ii. *p.* 858.

If great irritability in insane patients follows child-bed or typhus fever, excessive bleeding, or great fatigue, the bark will often be of the greatest service; but the bowels must be kept open, at the same time, as with the mixture, No. 74, page 114.

Swinging has been recommended by Dr. Cox, of Bristol, and by other practitioners. It appears more particularly useful in cases accompanied with high excitement, and after proper evacuations, by purging, &c.; and in those which are fast verging to a chronic state.

OF MELANCHOLY.

The chief *symptoms* in a strongly marked case of melancholy are, great apathy; obstinate disposition to dwell upon some mournful topic; sleeplessness; pertinacious silence, and other symptoms of morbid intensity of thought; the pupils of the eye dilated, with a peculiar dull, muddy look, often employed in a fixed, unmeaning stare or vacancy; general slight nervous thrilling of the muscular powers; anxious solicitude,

and importance attached to frivolous inconveniences, especially regarding the sufferer's health; love of solitude; dread of death, and fear of eternal punishment. In general, there are well-marked symptoms of indigestion, such as a pallid complexion, dull eye, languid circulation, loss of appetite, furred tongue, disturbed and restless nights, sometimes attended with fever, debility, frequent sighing. Frequently there is a relaxation of the scalp.

Melancholy rarely attacks young athletic persons. It is most common after forty.

The general *causes* have already been pointed out. Debility, with disorder of some important abdominal organ, as the stomach or intestinal canal, is the usual foundation of this form of mental aberration.

For the symptoms *distinguishing* melancholy from hypochondriasis, see the latter article.

TREATMENT. The place of retreat and security should be light, airy, pleasant, and cheerful; and the same attention should be paid to the patient's cleanliness, and to the procuring of regular stools, and discharge of urine, as in the first form, or madness.

The cure is to be attempted by the exhibition of mercurial alteratives, as the pill No. 99, page 120, every night, gentle emetics, purgatives, tonics, and soporifics; by active exercise and proper moral management.* Gentle emetics of emetic tartar and ipecacuanha are particularly indicated, where there is such torpor of the abdominal viscera as shews oppression, rather than exhaustion of the vital powers. Constipation must be removed by a suitable aperient of colocynth, calomel, and James's powder, &c. as No. 97, page 119; and the aperients must be so managed as simply to act as such from day to day, and not to debilitate. Sometimes, however, active purging is more useful, as when the strength is little impaired. If there is an obstruction to the usual monthly discharge in women, a combination of aloes, assafœtida, and James's powder, is particularly useful.

Take of socotorine aloes, in powder, ten grains; assafœtida gum, ten grains; James's powder, five grains; mucilage of gum arabic, a sufficient quantity to form the whole into five pills.—Take three or four every night, or every other night, so as to preserve the bowels in a regular state.

* "Drs. Duncan, Perfect, and Osiander, have strongly recommended the use of camphor in that form of melancholy and mental disturbance, which not unfrequently occurs during the period when the sexual feelings are developed. A more important remedy is the application of cold to the occiput and nape of the neck. Frequent ablutions with cold water is the simplest and most effectual method: occasionally, too, the local detraction of blood by leeches, or the cupping-glasses, may be of great service."—*Johnson's Medico-Chirurgical Review*, No. xli. p. 213.

Tonic remedies will generally be required. Among the most useful tonics here are ipecacuanha, cascarilla bark, gentian, columba, and Peruvian bark. Cordials are also indicated, especially the aromatic spirit of ammonia. For prescriptions, see No. 79, 82, or 85, page 115, or No. 104, or 106, page 121.

Soporifics are very beneficial, as it is of much consequence to ensure beneficial sleep; but opium must not be employed. Now and then we may with great advantage give a third of a grain of muriate of morphia. The best soporifics are camphor, extract of henbane and James's powder, and the tepid shower bath used just before going to bed.

Mild purgatives, and the extract of henbane, combined with camphor, and sometimes with James's powder, are the most efficacious remedies in insanity following child-birth. As soon as they can be commenced, tonics are often of great service; one of the best is the carbonate of ammonia, given in an infusion of calumba or cascarilla. Exercise should not be neglected.*

Local pain, and disturbance in the stomach, sides, belly, or head, must be combated by frictions with the flesh-brush, by repeated blisters upon spots at a moderate distance, and by the administration of the extract of hemlock.

The warm bath is sometimes a useful remedy. I believe it is said, that in the Retreat, near York, more benefit has been derived from the employment of this remedy than from any other.

The exercise should be of an active kind, and gestation in new bad roads is excellent. All employment should be as opposite as possible to former occupation, and diametrically opposed to the ruling topic of conversation, or of thought. All hurtful instruments must be removed. The diet should be the same as directed for madness, only in general somewhat more nutritious.

* Dr. William Hunter, a very able midwifery practitioner of the last century, says, in referring to the insanity of women in child-bed, "Mania is not an uncommon appearance in the course of the month, but of that species from which they generally recover. *When out of their senses, attended with fever, like paraphrenitis, they will in all probability die;* but when without fever it is not fatal, though it (that is, fever) generally takes place before they get well. I have had several private patients, and have been called in when a great number of stimulating medicines and blisters have been administered, but they have gone on as at another time, talking nonsense, till the disease has gone off, and they have become sensible. It is a species of madness they generally recover from, but I know of nothing of any singular service in it." The meaning of Dr. Hunter is, that there are *two forms* of puerperal or child-bed insanity: one of them is attended by fever, or rather by a rapid pulse; the other is accompanied by a very moderate disturbance of the circulation, or no fever. Cases of the latter kind, which happily are by far the most frequent, terminate in recovery; the former are generally fatal, do what we will:—and this seems to be supported by the general observation of practitioners.

Travelling and constant employment are equally applicable in melancholy and in madness, and are worthy of much regard.*

Firmness on the part of the attendant, with conciliatory manners, has done wonders; but a sense of authority must be maintained, though occasional severity should be necessary for this purpose; yet it will rarely be needful to exceed the coercion of the strait waistcoat. The immediate attendant must learn to govern by wisdom rather than subdue by terror. Judicious conversation and cheering advice are also of great importance. In many cases, the cure mainly depends upon withdrawing the patient's mind as much possible from every former scene and every former companion, in setting before him a new world, and giving an entire change to the current of his recollections and ideas.

What is said at the end of the article on *Epilepsy*, is applicable to the present afflictive malady, in whatever form it may manifest itself, and I would, therefore, direct the reader's attention to it, and especially to the recorded cases of cure from a recourse to the extraordinary means there alluded to.

OF ITCH.

The itch is an eruption of minute pimples, attended with an intolerable itching, and terminating in scabs. The pimples may contain either a white or yellow matter (pus,) or a thin watery fluid, and these are frequently intermixed. The eruption is found chiefly between the fingers, or in the flexures of the joints, and is contagious.

As a *primary* disease, itch is, in every instance, the result of personal uncleanliness, and an accumulation of sordes upon the skin, though the most cleanly are capable of receiving it by contact; and it always appears most readily where close air, meagre diet, and little exercise, are companions of personal filth. In camps and prisons, where the constitution has been debilitated by confined air and innutritious diet, the eruption has sometimes been known to assume a malignant character.

Some very able physicians have considered the presence of insects to be the sole cause of itch, but I believe them to be the effect and not the cause of the disease, as all stagnant fluids sometimes generate microscopic animals; and this is the general opinion among medical men. Such insects are not always to be traced in this complaint, but are undoubtedly to be seen occasionally.

* Boswell states, that Dr. Samuel Johnson observed to him, "employment and hardship prevent melancholy," an opinion in which he was perfectly correct.

TREATMENT. The remedy which has been employed with the greatest success in the cure of this disease is sulphur, which is made into an ointment with hog's lard, and rubbed over the infected part every night. The sulphur ointment sold by the druggists may be used in this way, and washed off in the morning; a few such applications being, in general, sufficient to cure the disease. The following is a very efficacious ointment, which may be employed in the same way as the simple sulphur ointment.

Take of sulphur, bay-berries, in powder, sulphate of zinc, of each, two drachms; essence of bergamot, ten or twenty drops; olive oil, a sufficient quantity to make an ointment.

These are the safest and most effectual applications. But when it is impracticable to employ them, the following lotion is recommended.

Take of muriated quicksilver, one drachm; water, half a pint; crude sal ammoniac, two drachms; purified nitre, half an ounce.—Mix. The hands are to be washed with this solution night and morning, and a little of it is to be applied with a clean sponge to the pustules and other parts.

If it be practicable, a warm bath may be advantageously taken every other day till the patient is well. And when the constitution has been influenced, aperient medicines, as No. 73, or 74, will also be necessary, and ought not to be neglected.

OF JAUNDICE.

Jaundice is characterized by yellowness of the eyes and skin, whitish or clay-coloured stools, and saffron-coloured urine, which communicates a saffron dye.

It comes on with languor, inactivity, loss of appetite, bitter taste in the mouth, lowness of spirits, and costiveness, or looseness. As it advances in its progress, the skin and eyes become tinged of a deep yellow; there is a sense of heat and pricking in the skin; nausea; vomiting; sense of uneasiness or pain in the bowels, and towards the right side, and other symptoms of indigestion. The stools are of a clay-colour, or white, or very dark; the pulse is generally slow, yet sometimes, especially where the pain is acute, it becomes quick and hard, and there is a feverish heat and dryness of the skin.

The disease, when of long continuance, and proceeding from a chronic affection of the liver, or other neighbouring abdominal organs, is often attended with dropsical swellings, and sometimes with dropsy of the belly.

It should be observed here, that jaundice is of two kinds, viz.

the yellow and the green. In the first kind, the skin and the white of the eyes are more or less tinged of a yellow colour; in the second kind, the skin and the white of the eyes are tinged of a green colour, more or less mixed with yellow, but the green colour is very predominant. In some parts of the skin the green colour is very deep, so as to have some blackness in its hue; and this circumstance has given rise to the name of black jaundice, by which this form of the disease has been often distinguished.

The green jaundice by no means occurs so frequently as the yellow jaundice. It is most common at the middle and more advanced periods of life, and appears more frequent in men than in women. It is in general more difficult of cure than the yellow jaundice.

The *most frequent causes* are, the pressure of biliary calculi, (or stones) in the gall-bladder, and its ducts; spasmodic constriction of the ducts themselves; pressure upon the ducts, either by collections of hardened excrement, or by tumours of the neighbouring organs, or swelling of the glands; redundant secretion of bile; general and severe disorder of the intestines, and other digestive organs. Costiveness and loaded bowels is a frequent cause, and disease of the right kidney, or even of the right lung, may give rise to it. The complaint is often closely connected with irritation in the internal surface of the intestines, and the liver may be but inconsiderably affected.

An irregular or sedentary mode of living will produce it, especially continued indulgence in spirituous liquors. Great mental agitation will cause it in those disposed to it.

The *immediate cause* is the absorption of bile into the vascular system, by which means it is mixed with the blood, and circulates with it.

Treatment. The principal objects of treatment are, to allay irritation in the intestinal canal, and to remove the obstruction existing to the free passage of the bile through the biliary ducts, and along the intestines. It will be frequently found, that the best means of allaying irritation in these parts will be the most effectual in removing the jaundice. The most powerful means for this purpose consist in the use of a warm bath, with purgatives occasionally, as No. 73, or 74, page 114, or mild aperients regularly, soap, and other alkaline medicines, stomachic bitters, mercurial alteratives, and the Cheltenham or Bath waters, particularly the former.

The patient should take a warm bath at ninety-six or seven degrees, every other morning about eleven o'clock, with the following pills during the day.

Take of Castile soap, a drachm and a half; rhubarb, in powder, eight grains; ipecacuanha, in powder, ten grains; oil of juniper, ten drops; syrup of orange-peel, a sufficient quantity to make the whole into twenty-four pills. Three to be taken twice or thrice a day.

At the same time, the warm stomachic pill, No. 100, or 101, page 121, should be taken every other night, or as frequently as is necessary to preserve the bowels in a free laxative state, without their being purged. Or when there is a good deal of pain in the bowels, the following opening pill may be used instead.

Take of compound extract of colocynth, extract of henbane, of each, a drachm.—Mix, and divide into twenty-four pills, one, two, or three to be taken as above directed.

Sometimes rather active purging with calomel, and neutral salts, is very useful, but it must be resorted to with care where any positive disease is apparent in the liver, or other adjacent organ. Gentle purging with the neutral salts is perhaps the most beneficial mode; and the aperient waters of Cheltenham or Leamington are often of signal service. If they cannot be obtained, one or two drachms of both the Epsom and Glauber's salt may be dissolved in half a pint of lukewarm water, and taken every morning for a fortnight; and resumed for another fortnight or three weeks after being laid aside for a week. The purging occasioned by the Cheltenham waters does not produce debility. Dr. Baillie states, that he has found the practice of keeping up a gentle action on the bowels, by means of the neutral salts, to be very useful in green jaundice.

The infusion of columba, or compound infusion of gentian, are sometimes beneficial stomachics, for use during the day.

When there appears a good deal of obstinate obstruction about the organs affected, the compound calomel pill, No. 98, or 117, page 124, should be taken every night, in conjunction with the above remedies. It ought never to be omitted when the liver is evidently indurated or enlarged. And when the local pain is not acute, a gentle emetic of ipecacuanha powder, about twice a week, will be advisable.

The preceding means will generally succeed in curing jaundice, and are very safe, but I have some confidence in raw eggs, and if the patient prefers trying this simple remedy first, he cannot be said to act unwisely. The late Charles White, a surgeon of eminence and ability, at Manchester, held the use of raw eggs in great estimation, and makes the following sensible remarks on the subject, in his *Treatise on the Management of Lying-in-Women, p. 74, third edition*, 1785.

"It is not improbable that the temporary jaundice, to which women with child, new-born infants, and even adults of both sexes are frequently subject, owes its origin to the stoppage of the mouth of the *ductus communis choledochus*, (the duct which carries the bile into the intestines) by some tenacious gluten obstructing either totally or in part, the passage of the bile into the duodenum, and thereby occasioning its return into the blood. The attention I have paid to jaundiced patients of both sexes, and of every age, who have been cured by frequently taking raw eggs in cold spring water, has inclined me much to this opinion. My supposition is, that eggs act as a dissolvent of the gluten which obstructs the mouth of the duct, thereby opening a free passage for the bile into the duodenum. We know that yolks of eggs will destroy the tenacity of gums and resins, and render not only them, but also oils, and natural balsams, miscible with water.

"The first trial I had of this remedy was upon myself about fourteen years ago, when I had been afflicted with the jaundice many weeks, and was much reduced, no bile having for a long time passed into the intestines, when my skin was almost black, and after I had in vain taken large quantities of soap, madder, steel, rhubarb, and aloetic medicines. An officer of marines told me that if he might be allowed to prescribe, he would immediately cure me. I laughed at his proposal; when he informed me that some years before, in the Mediterranean, he was troubled with the same disorder, to as great a degree as myself, and that after he had ineffectually tried all the remedies the surgeon of the ship could think of, a Spanish physician at Minorca, had assured him he could cure him in a few days, by this simple prescription only,—two raw eggs, the whites as well as yolks, to be taken every morning in a glass of water fasting, with the addition of an egg every four hours during the day. That in three days after following this advice he began to perceive the bile in his stools, though none had appeared in them for many weeks before; that he immediately began to recover, and was very soon effectually cured. Upon considering the dissolvent property of yolks of eggs, and that eggs must at least afford a nourishment totally void of acrimony, I began to entertain a more favorable opinion of the recipe.

"I tried it, and found it had exactly the same effect which he had promised me. Though I was certain no bile had passed through me for six weeks before, upon taking the eggs only three days it began to flow, and in only one day more in as great plenty as I could wish. I continued however to take them several months, and have never since had any return of the disorder.

"I have recommended the use of them to many persons under the same complaint, and have always had the satisfaction of finding their success, except in cases where the disorder was occasioned by a diseased liver, or by stones in the gall bladder."

In two instances of the most obstinate and long protracted jaundice, where the patients were reduced to skeletons, and the skin, for many months, the colour of mahogany, inspissated ox-gall produced the best effects. It tinged the motions, lessened the irritability of the stomach, increased the peristaltic action of the bowels, and in both instances recovery ultimately took place, after all hopes had been abandoned both by physicians and friends.

The Bath waters have been much recommended, and will be

sometimes very serviceable, especially where the disease has originated from too free an indulgence in spirituous liquors, or a residence in a tropical climate.

Where there is a great deal of torpidity about the biliary ducts, which is unaffected by other remedies, electricity promises to be of much service. A few slight shocks may be passed daily in the course of these ducts.

When the disease originates in positive disease of the liver, or other abdominal organ, only the means recommended under the head of LIVER COMPLAINT can succeed. Should obstinate costiveness, and accumulated excrement, be the cause, the purgative clyster, No. 8, page 97, must be frequently administered, with purgatives by the mouth, warm fomentations, and the warm bath.

For the relief of acute pain in the pit of the stomach and bowels, the most efficient remedies are hot fomentations, warm emollient clysters of gruel and oil, and pills of opium and hemlock. A grain of opium may be united with six or eight grains of extract of hemlock, and given every three or four hours, if the pain be owing to spasm, which it commonly is. If inflammation be present, bleeding, of course, must be resorted to.

The warm bath, warm fomentations to the abdomen, and gentle aperient medicine, are means applicable to every case of jaundice, from whatever cause it may arise.

The bitter-sweet (*dulcamara*) has been praised for its excellent effects in this disease, and as it is, without doubt, a powerful medicine in many cases, I think it worthy of some confidence in jaundice. If the foregoing means fail in affording satisfactory relief, it may be tried with much propriety in the following manner: Infuse a pound and a half of bitter-sweet in two bottles of white mountain wine, over a very slow fire, for seven or eight hours, then, after removing it from the fire, and allowing it to become cold, press the bitter-sweet as dry as possible, and strain it for use. The plant, should, if possible, be of the last year's growth, and fresh gathered; and it should be cut into pieces of four or five inches long, and every piece beat flat, before it is infused in the wine. The dose is a quarter of a pint every morning fasting. During the use of this medicine, the urine of the patient should be examined daily, and when it ceases to deposit a sediment, the dose of the infusion should be decreased to one-third, and in a few days left off. This is said to have been employed, in numerous instances of severe jaundice, with complete success.

The nitro-muriatic acid bath has been recommended as a valuable remedy for jaundice, as well as for all other severe

diseases in which the biliary organs are principally concerned. It certainly has great power in allaying irritation in the digestive organs, and is, therefore, deserving a trial, where the preceding means fail. It may be used in the way directed at page 61.

Should the disease assume a scorbutic form, the administration of the vegetable and mineral acids, as advised under scurvy, must make a part of the general treatment.

In all cases, daily exercise is useful, and should be used freely, but short of much fatigue. Horse exercise is particularly advisable. The diet should be mild, but sufficiently nutritious, being regulated by the principles laid down under INDIGESTION.

Occasionally, infants are attacked with jaundice soon after birth, which will generally yield to a dose of castor oil, or any other active purgative. When a purge is not sufficient to remove it, an emetic of ipecacuanha wine will be advisable and effectual.

Many persons who have resided long in a hot climate, contract a sallow, yellowish complexion, which hue often pervades the whole skin; this is generally regarded as a mild sort of jaundice, or as arising from the absorption of bile, but it is usually of a different nature. In most instances, it is not owing to this cause, but to a peculiar alteration in the capillary* circulation, on the external surface of the body, in consequence of the skin's sympathizing with a weakened and irritated condition of the digestive organs, more especially of the stomach and bowels. These organs at all times exert a marked and powerful influence on the skin;—when they are in health, and performing their functions with energy, we find the skin soft and smooth; when they are disordered and weakened, it is uniformly harsh, dry, and unpleasant:—and as the exhausting effects of sultry climates greatly enervate the digestive canal, in this we see a sufficient reason for the sallow, rough, and unhealthy condition of the skin, so often witnessed in persons lately returned from a tropical region. Such a state of the skin is most safely and effectually removed by mild aperients, as No. 28, with a mercurial alterative, as No. 99, page 120, and a warm bath at ninety-six degrees occasionally. Dandelion and ipecacuanha are also valuable medicines in such cases, and the purging waters of Cheltenham, Leamington and Harrowgate, are frequently of the greatest service.

* The capillaries are the minute vessels of the circulating system.

OF LEPROSY.

Leprosy is a scaly disease of the skin, which is rare in this country, but not unfrequent in sultry climates. It is frequently met with in Egypt, and the countries bordering upon it. There are three or four varieties of it, the mild sort being incapable of communication, while the more severe are certainly contagious.

The leprosy appears in the form of white scales, of a circular form, preceded by reddish and glossy elevations of the skin, and encircled with a red border. The scales may be either dull-white, dusky or livid, or glossy-white.

It is produced chiefly by cold; moisture; great heat and uncleanliness combined; excessive fatigue, combined with a low and precarious diet.

TREATMENT. Warm bathing is useful in all cases of leprosy, and in general, the Harrowgate waters, whether applied externally or internally, are of much service. The hemlock drop-wort has likewise been highly spoken of, and the tincture of cantharides; but the most active and salutary medicine is arsenic: it will, however, require great caution in its use. As external applications, either the tar ointment, or the ointment of nitrated mercury undiluted, or equal parts of tar ointment and diluted ointment of nitrated mercury, (No. 89, page 117,) may be rubbed into the parts affected every night, and carefully washed off the next morning with warm water.

In mild cases, the cure may be safely trusted to the external use of one of these ointments and the warm bath, with the administration internally of the Harrowgate, or any other sulphureous mineral water, the bowels being kept regular by a mild pill, (No. 100, or 101, page 121,) and the diet such as is calculated to nourish and strengthen.

In the severer examples, two or three tea-spoonfuls of the juice of the hemlock drop-wort, or one or two table-spoonfuls of a strong infusion of the leaves, may be taken every morning. Or from five to ten drops of the arsenical solution may be tried twice or thrice a day. It is best borne on a full stomach; but both these medicines must be very cautiously used. The warm bath, and one of the ointments just noticed, must be employed at the same time.

OF LIVER COMPLAINT.

By liver complaint I mean positive disease, of a chronic character, in the structure of that viscus.

The most frequent *symptoms* are, a sense of weight or uneasiness in the right side; pain at the top of the shoulder; sallow complexion; impaired or capricious appetite; irregular bowels, and discoloured offensive motions; progressive emaciation and debility; and a quick, regular pulse. The pain is generally much increased on pressure below the ribs of the side affected; a sudden jerk, from a false step or other accident, occasions acute pain in the right side; there is, for the most part, some degree of cough with expectoration; the breathing is sometimes difficult and oppressed; the urine is high coloured; and the patient cannot, in general, lie on the left side. Sometimes there is an enlargement, to be felt on manual examination, under the false ribs on the right side.

Whatever greatly weakens and disorders the stomach and bowels, or impairs the general health, may lay the foundation of disease in the liver. It is most frequently induced by the exhausting and deleterious influence of a sultry climate, combined with the excesses so commonly indulged in, by European residents, in such regions; by anxiety of mind; excessive use of mercury, or of ardent spirits; insufficient exercise, and sedentary occupations. It is not unfrequently met with as a sequel of acute inflammation in the organ.

The term *liver complaint* is now far too indiscriminately employed. It is properly applied to designate disease in the texture of the liver; but the majority of the maladies called by that name are in reality severe disorders of the digestive canal, that is, chronic affections of the stomach, or intestines.

Liver complaints may generally be *distinguished* from severe disorder of the functions of the stomach, or intestinal canal, by the slow but progressive emaciation and loss of muscular strength present,—by the fixed and determinate character of the malady,—the quick, but regular pulse,—and the continued pain or uneasiness in the right side. In functional disorder of the digestive canal, on the contrary, the loss of flesh is not often so great, and never progressive; the complaint frequently varies; the pulse is generally irregular, slow, and sometimes intermitting; and the uneasiness felt in the abdomen is chiefly about the pit of the stomach, or in the bowels.

Treatment. The unthinking, and less skilful, part of the profession, almost universally agree, that mercury is here the "fit and only remedy," and in general they scruple not to prescribe it very freely; but those whose experience and judgment

are most to be depended on, are very cautious in the employment of that mineral, and place little reliance on it in the treatment of this disease, when uncombined with other medicines, and a correct diet and regimen. Notwithstanding, mercury, when judiciously prescribed as an alterative, in small doses, and in conjunction with antimony and opium, is sometimes very beneficial, and never hurtful; but salivation is almost invariably to be avoided, at least in this country. In tropical climates, this remedy may be carried to a greater extent in treating the present disease, not only without injury, but with advantage; yet even in such a situation, I think much mischief is often produced by its incautious employment, in consequence of practitioners seeming to consider its utility to be nearly proportionate to the quantity speedily introduced into the system, and from their forgetting that diseases of a chronic character, which are slow in their progress, can never be cured quickly, or by violent measures. When calomel, or any other mercurial preparation, is employed in liver complaints, it should be administered in such small doses as relieve pain and irritation, without very sensibly affecting the constitution in any other way.* With this view, the pill, No. 98, or 99, or Plummer's pill, No. 117, page 124, may be taken every night, with a saline aperient, as No. 27, page 103, every other morning, and a bitter stomachic twice in the day. The stomachic mixture, No. 82, page 116, will sometimes prove very useful. As auxiliaries to this plan, a warm bath at ninety-five degrees twice a week, an occasional blister over the region of the liver, or a seton in the side, with change of air and scene, and the diet and regimen recommended for INDIGESTION, will be very proper and beneficial. Frequently, the alkaline solution (page 2) may be taken in the day as a tonic, with much advantage.

The dandelion (see page 28) is a very useful medicine here. A man, aged about 46, living at Wallington, in this neighbourhood, had felt uneasiness in the right side for several years; about two years since it increased to actual pain, which being accompanied with a quick hard pulse, loss of flesh, and considerable debility, caused him to relinquish his employment. All the symptoms concurred in proving this disease to be a severe

* Some persons are extremely sensible of the influence of mercury on their system, and when we do not know the constitution of the individual, we should always commence with the smallest doses. The extreme sensibility of some persons, under the action of mercury is forcibly illustrated by the following fact: – A patient has been known to regulate his hepatic system, whenever there was a deficiency of bile in his motions, by taking asses' milk medicated by giving the animal a certain quantity of nitrate of mercury. The effect was very marked, and he could bear mercury in no other shape.

liver complaint. Many remedies were tried for many months, as bleeding, cupping, mercurial alteratives, blistering, mild aperients, stomachics, &c., but they proved no remedies to him; at length we advised him to take a tea-cupful of a strong decoction of dandelion, twice a day, and to lay aside all other medicines. He did so, and I saw him no more as a patient; it succeeded in relieving and restoring him to admiration.

The mineral acids, particularly the nitric acid, are sometimes of great benefit in this disease. After the above plan has been persevered in for two or three months, or more if necessary, and the mercurial pill has been laid aside, twenty, thirty, or forty drops of the diluted nitric acid may be taken three times a day, in water, or infusion of cascarilla; and whether the preceding remedies have been useful or not, these drops will be proper, and often serviceable.

As aperients, the saline water of Cheltenham and Leamington are, undoubtedly, employed with superior advantage, and often with striking benefit. Therefore, when it is convenient for the patient to resort to them, they should be substituted for the draught, No. 27, noticed above. The Cheltenham and Leamington *salts* are no better than Glauber's salt.—See page 21.

The warm waters of Buxton are also valuable in this disease, and, when the patient's means allow, he may frequently go from Cheltenham or Leamington to the waters of Buxton with increasing benefit. The Harrowgate water is likewise deserving of confidence.

The late Dr. Scott, of Russell Square, who practised many years in India, has recommended the nitro-muriatic acid bath as a valuable remedy in liver complaint; and, although it has met with a good deal of opposition in some quarters, I am persuaded from personal experience, that, in some cases of this disease, it will produce very beneficial effects, and be more useful than mercury in any form, and than almost any other remedy.—See page 61.

In the present case, leeches are frequently applied to the region of the liver, but, I think, without satisfactory results, unless the tension and pain are very considerable, and the other remedies fail to remove these symptoms. I have rarely seen them afford much relief in chronic disease of this organ, and would recommend them never to be employed, unless the necessity for their use be clearly indicated; since if applied when not called for, it appears to me that they cannot fail of being injurious, by increasing the debility already existing.

OF LUMBAGO.

Lumbago means rheumatism of the loins. Its causes and general treatment are laid down under the article *Rheumatism;* but as it is necessary, in a popular work, to be as clear and explicit as possible in giving directions for the cure of every form of this disease, I shall say a little here on those remedies which seem more especially applicable to this variety of rheumatic affection.

One of the most efficacious plans for the cure of severe lumbago, is to take fifty or sixty drops of the ammoniated tincture of guaiacum, on sugar, or in milk and water, three times a day; to rub the liniment, No. 45, page 106, into the parts affected, morning, noon, and night, and to take one or two of the aperient pills, No. 100, or 101, page 121, every other evening, so as to keep the bowels regular without purging them. A warm bath at nine-six degrees should likewise be taken every other morning; and the diet should be nutritious and easy of digestion, as directed for INDIGESTION.

Should this plan fail, from a scruple to half a drachm of Peruvian bark, in powder, or a grain or two of sulphate of quinine made into a pill, may be taken thrice a day, and one of the alterative pills, No. 98, or 99, page 120, every other night; the bowels being kept free from confinement by the above aperient pills, and the liniment and warm bath employed as just directed. If the bark disagree, it may be changed for a strong bitter infusion, as No. 82, or 83, page 116, or the pills, No. 104.

Now and then, lumbago is particularly obstinate and severe. In such instances, the external use of the warm waters of Buxton are frequently an admirable remedy, with which may be conjoined the alterative pill, No. 98, or 99, or the opiate pill, No. 109, and constant friction over the loins, either with the flesh brush, or the liniment, No. 39, or 41, page 106.

Should the pain be urgent, one of the best and most efficacious medicines for its relief is the compound powder of ipecacuanha, and camphor, three or four grains of each of which, made into two pills, may be taken occasionally. It will not interfere with the effects of any other medicine. The pills of calomel, tartar emetic, and guaiacum, prescribed in the latter part of ACUTE RHEUMATISM, are likewise excellent.

Some persons are too apt to let blood in severe lumbago, thinking that the urgency of the pain, and the obstinacy of the complaint, may be overcome by this remedy when others have failed; but it rarely fails to render the disease still more intractable, and is a means which, in my opinion, should scarcely ever be resorted to.

OF MEASLES.

The measles is an infectious fever, attended with an eruption on the skin, which very rarely attacks the same person a second time.

The patient for the first day generally complains of alternate heats and chills, and the other feelings usually preceding an attack of fever; on the second day, though sometimes not till the third, the fever is completely formed. Much thirst is now complained of, often accompanied with nausea, and sometimes with vomiting; the tongue is generally white and moist; there are pains of the head, back, and loins; the face is flushed; the pulse frequent and hard, and the breathing hurried. The patient is early attacked with a dry cough and hoarseness; the eyes are red, swelled, itchy, very sensible to light, and watery; the nose is inflamed, and often discharges a copious thin secretion. There is generally some remission of the *symptoms* in the morning, but they return in the evening with increased severity. In the more alarming cases, there is spasms of the limbs, sometimes delirium, but more frequently a lethargic stupor.

The eruption generally shows itself towards the end of the third or the beginning of the fourth day; sometimes not till the fifth. It comes out on the forehead in small points, which are generally distinct at first, but here and there increasing in nnmber and size, are soon formed into small clusters, so that the face seems marked with red stars of various size and figure. The parts occupied by the points are rough to the touch. From the face the eruption gradually spreads to the neck, breast, trunk, and limbs, generally appearing on the limbs the day after it shews itself on the face. The stains on the face continue red for two days, on the third they assume a brownish colour, and, in the course of the fifth, or at most the sixth, that is, about the eighth or ninth day of the disease, the redness on the face nearly disappears, although traces of it often remain for four or five days longer. The outer thin skin is now broken and raised in the places which the eruptions occupied, so that the face appears covered with a light whitish powder. When the redness has declined on the face, it is at its height in the limbs, where, about a day or two later, it runs the same course.

The more early and free the desquamation, which occasions the whitish appearance just mentioned, the more favorable is the prognostic. The eruption becoming livid or black, indicates much danger.

There is generally a considerable tendency to inflammation throughout the whole course of the measles, and those parts are

most subject to it which are most apt to be inflamed in common cold, the eyes, the nose, throat, and lungs. The inflammation of the eyes, nose, and throat, is usually of little consequence; it seldom becomes very troublesome, and declines with the other symptoms. The inflammation of the lungs may come on at any period, but is most frequent after the eruption is gone off.

When neither the habit nor mode of treatment are bad, the disease itself seldom proves fatal; but its consequences are often troublesome. Its most frequent consequences are, the various forms of scrophula, as glandular tumours, wasting from obstruction in the mesenteric glands of the belly, obstinate sores, a weak and inflamed state of the eyes, and pulmonary consumption. A moisture on the skin at the appearance of the eruption; early and free expectoration; moderate looseness, and mild fever, are favorable symptoms.

Sometimes the disease is much more violent and far less regular in its symptoms than is above described; the inquietude and restlessness being much greater, delirium supervening early, the throat being of a deep or dusky red colour, sense of great oppression about the chest, and the fever often assuming the form of typhus at an early period.

The *grand cause*, in every instance, is a specific contagion.*

The circumstances which determine the severity of the disease are far from being well ascertained; almost all we know on this subject is, that it is particularly unfavorable in full, and often still more so in scrophulous habits.

The symptoms by which the eruptive fever of measles is *distinguished* from small-pox and other diseases, are, the dry cough and hoarseness; the sneezing and discharge from the nose; and the appearance of the eyes, which are red, swelled, itchy, very sensible to light, and frequently loaded with tears.

TREATMENT. In mild cases, the object of treatment is, to promote a gentle breathing perspiration, and a free expectoration, by means of mild purgatives, saline and other medicines which have a febrifuge effect, and determine to the skin, dilu-

* When a number of children are living in the same house where the measles is present, as in boarding schools, poor houses, &c. it is of much moment to be acquainted with the means of preventing the spread of the contagion, and I would here recommend the free use of the chloride of soda or lime, as a safe and effectual antidote. See the manner of using them at page 199. M. Labarraque, of Paris, says that he has lately witnessed a satisfactory instance in which the infection arising from measles, which had occurred in a boarding school, had been perfectly arrested, without the removal of any of the pupils, by the employment of these chlorides. And M. Lisfranc, surgeon in chief of the hospital la Pieté, in Paris, has fully ascertained that the air of wards where small-pox patients are confined, no longer communicates the disease, whilst daily sprinklings with these solutions are employed. There can be no doubt that the same means will prove of equal efficacy in arresting the progress of the infection of scarlet fever, &c. But it must not be forgotten, that the use of these chlorides ought never to supersede ventilation.

ting drinks, and a spare low diet. In such simple cases it is a great point not to do much, but to leave the main work to the natural efforts of the system. Some physicians of great ability recommend an emetic, No. 29, page 103, as always useful on the incursion of the disease, and it is worthy of attention. After it has operated, the purgative medicine, No. 28, page 103, may be given and repeated every day, so as to preserve the bowels in a lax state; the saline mixture, No. 81, page 115, being administered through the day. Or, instead of this mixture, three or four grains of James's powder may be given three or four times in the twenty-four hours. The diluting drinks recommended in inflammatory fever, such as barley-water, tamarind-tea, and the like, should be taken freely; and all animal food and fermented liquors must be avoided. All the drink should be tepid.

But when the symptoms are severe, and there is a good deal of pain in the chest, and difficulty of breathing, blood-letting must be resorted to, as, in addition to the object to be fulfilled in mild cases, we have here to prevent or remove inflammation in the chest. It is seldom, however, that these symptoms come on till the eruption is going off, and the abstraction of blood should never be resorted to early in the disease, unless it be clearly necessary.* Under the circumstances just stated, of great difficulty of breathing, and an unusually hard pulse, from eight to sixteen ounces of blood should be taken from the arm, and if these symptoms continue little or not at all relieved by the first evacuation, the operation should be repeated to the same extent. The application of leeches to the chest is often advisable, in addition to the general bleeding. And after the loss of blood, a blister should be applied over the chest; the purgative and saline medicines, with diluting drinks, and a low diet, being resorted to as just advised. In the severer forms the diet, of course, must be very spare and low, and the purgative medicine may be administered a little more freely than is necessary under the milder attacks. In such acute cases as we now advert to, in which inflammation of the lungs is to be suspected, I am partial to the use of calomel combined with James's powder, and a small proportion of opium, joined with the above means. From half a grain to a grain of calomel, with three grains of James's powder, and an eighth-part of a grain of opium, may be made into a pill, and given every three or four hours till the symptoms are relieved. It has often a powerful effect in arresting the progress of inflammation in vital organs.

* "As this fever," Dr. Cullen remarks, "is sometimes violent before the eruption, though a sufficiently mild disease be to follow, so bleeding is seldom very necessary during the eruptive fever, and may often be reserved for the periods of greater danger which are perhaps to ensue."

With regard to exercise, if the patient finds himself inclined, from the commencement, to remain in bed, he should not be prevented; at the same time there is no occasion to confine him to it against his inclination. In all cases, towards the period of the eruption, he feels fatigued, and averse to motion. Whether he be in bed or not, extremes of heat and cold are equally to be avoided. In all cases, the room in which the patient is confined should be large and airy, and free from currents of cold. Free exposure to cold is highly serviceable in small-pox, and, therefore, some medical men have recommended it in measles; but the testimony of a great majority of the medical profession is decidedly against it. On account of the cough always present in this disease, and there being a great tendency to inflammation of the lungs, cold must in all cases be carefully guarded against. If the cough be troublesome, it will be useful to breathe the steam of warm water, not through an inhaler, but over a large basin, with the head covered with a flannel large enough to hang over its edges; and by this means the inflamed eyes will also have the benefit of the relaxing vapour.

If the oppression of the chest, pain, and hard pulse, should return, as they are apt to do on the disappearance of the eruption, blood-letting or cupping must again be had recourse to, however freely they may have been employed antecedently.

Opium should never be given to relieve the cough, as it generally fails in effecting this object, and always increases the fever and restlessness. One of the best medicines for this purpose is the following:

Take of extract of hemlock, extract of henbane, (both prepared in vacuo) of each, half a drachm; ipecacuanha, in powder, twelve grains.—Mix, and divide into twelve pills; one to be taken three times a day. From half a pill to a pill may be given to children above a year old, and below ten years.

A spontaneous looseness proves the most favorable crisis. When moderate it should not be interfered with, and even when it appears excessive, only the mildest astringents should be given in small doses, so as to lessen, but not altogether remove it. A few grains of tormentil powder, with or without ipecacuanha, is perhaps the best medicine for this purpose. See page 84.

In case the measles should suddenly disappear, endeavours should be immediately resorted to in order to restore the eruption to the skin. The patient must be placed in a warm bath, blisters be applied to the inside of the thighs or legs, and to the chest, and a little warm wine diluted with water, be given frequently, with ten drops of antimonial wine every hour, which may be taken either in the wine, or in warm tea.

Now and then the progress of the measles is irregular, and the symptoms malignant, the fever terminating early in typhus. In such instances, the best medicines are bark, wine, and opium, the two last being used cautiously, and in small doses. If the oppression of the chest be considerable, blisters should be applied. The tartar emetic ointment, rubbed on the chest, may be sometimes still more beneficial; or a mustard poultice, quickened with oil of turpentine, and applied to the chest, may prove of the greatest service when there are symptoms denoting inflammation within the chest, and the debility, at the same time, too great to admit of bleeding.

Some of the most troublesome consequences of measles, is a hoarseness, cough, shortness of the breath, and inflammation of the eyes. The hoarseness is often best removed by the bark when there is no fever nor difficulty of breathing. For the cough I would recommend the pills above prescribed. A gentle purgative frequently relieves the shortness and difficulty of breathing, and, if that fails, a blister to the breast bone, and frequently repeated, or the tartar emetic lotion (No. 44, page 106) rubbed freely into the same part, are the best means. To moderate and remove the inflamed state of the eyes, exposure to light should be avoided, and the eyes be frequently washed with the lotion, No. 13, page 98. After the inflammation has been subdued by means of quietude, low diet, and exclusion from the light, and the complaint assumes an indolent character, one of the most efficacious remedies is the diluted ointment of nitrated quicksilver, No. 89, page 117.

It is, however, remarkable that blood-letting sometimes removes certain symptoms remaining after measles, for the removal of which, under other circumstances, very little is to be expected from it. Thus it has removed cough, although unaccompanied by fever, or the other symptoms denoting inflammation. It may, therefore, be tried to a small extent when the previous means fail to remove the cough, difficulty of breathing, and other symptoms above mentioned.

It will be necessary cautiously to avoid exposure to cold for some time after the patient has recovered.

Tonics are almost always injurious during convalescence from measles. When the system is left exhausted, being free from irritation, if any strengthening medicine is likely to be of service, it is the serpentaria in infusion, see page 76.

The following interesting and valuable observations of Dr. Armstrong, are worthy of record here:

"It is a remarkable fact, that when any cutaneous affections arise after measles, the internal organs generally remain free from disease; and even where some internal disorder has existed, I have not unfrequently

seen it disappear on the occurrence of some spontaneous eruption of the skin. Indeed, there are many cases of this nature already on record. At all times, we should, therefore, be most wary in meddling with vesicles, pustules, boils, and the like, when they come out after the measles; for although they may be temporary blemishes on the surface, they are often the occasion of saving the vital walls within."

OF MENSTRUATION.

The time at which the menstrual discharge commences varies from many circumstances, chiefly, however, from those of climate, and of peculiarity of constitution. In warm climates, menstruation appears often as early as at eight or nine years of age; for here the general growth of the body advances more rapidly than in colder quarters, and the atmosphere is more stimulant. In temperate climes, it is usually postponed till the thirteenth or fourteenth year; and in the arctic regions till the nineteenth or twentieth. In all climates, however, when the constitution has acquired the age in which it is prepared for the discharge, various causes may accelerate its appearance. The chief of these are, preternatural degrees of heat or feverishness, or any other stimulus that quickens the circulation; anger, or any other violent emotion of the mind; inordinate exercise; fear and severe grief.

The discharge usually lasts from three to five days, and the quantity lost upon an average is about six ounces; but with many women it continues longer, and they lose more than this, while with some both the period and quantity are less. The monthly return continues till the fortieth or fiftieth year. Women of a delicate habit and lax fibre, have a more copious and longer continued discharge than those of a robust constitution.

For the two or three first times of its appearing, it is apt to be somewhat irregular, both as to the quantity of blood which is discharged, and the period of its return; but after these, it usually observes stated times, and nearly the same quantity is lost at each visitation, unless some irregularity takes place.

About the first appearance of this discharge, the constitution undergoes a very considerable change, generally indeed for the better, though sometimes for the worse. The greater care is then necessary, as the future health and happiness of the female depends in a great measure upon her conduct at that period.

She should be careful to take exercise daily in the open air, to partake of a wholesome nutritious diet, and not to indulge in tight clothes. The exercise should be free and active, which will be found to promote digestion, to enliven the spirits, and to insure a proper discharge. It is worthy of the especial attention of young women, that one seldom meets, at this period,

with complaints from obstruction amongst the more active and industrious part of the sex; whereas the indolent, inactive, and luxurious, are seldom free from them.

After the *menses* have begun to flow, great care should be taken to avoid every thing that may tend to obstruct them. Females ought to be exceedingly cautious of what they eat and drink at the time they are out of order. Every thing that is cold, or apt to sour on the stomach, and all things which are found by experience to disagree, ought to be avoided.

Exposure to cold is extremely hurtful at this period.* More females date their disease from cold caught while they are in this situation, than from all other causes. A degree of cold that will not in the least hurt them at another time, will at this period often be sufficient entirely to ruin their health and constitution. It is not meant that they should then confine themselves wholly in the house and warm rooms, but that imprudent exposures should be guarded against, and the clothing be somewhat warmer than usual. I have lately heard of a young lady, in my neighbourhood, who was suddenly seized with mental derangement after the improper use of cold water at this particular time; and all the means hitherto employed to restore her health and reason have altogether failed.

The final cessation of the menstrual discharge is likewise a critical period with all women, and, therefore, I shall here say a little on the treatment necessary at that time; and also of painful menstruation. The retention and suppression of this discharge are distinct diseases, which are treated of under those heads respectively.

OF THE FINAL CESSATION OF THE MENSES.

This discharge seldom ceases all at once, but for some time before its stoppage becomes somewhat irregular both as to the periods and the quantity. The time of this final cessation is always a critical one, because the constitution then undergoes a considerable change, and there is often a strong tendency to the formation of obstinate and painful chronic complaints.

The grand object of treatment at this period, should be to quiet irregular local irritation wherever necessary, by gentle laxatives, as No. 73, or 74, page 114, and moderate opiates or

* "Frank mentions the case of a young lady, who put her feet several times into cold water, during this period, because she expected her lover, which produced a suppression; an inflammation of the womb followed, and she was brought dying into the hospital at Vienna. He also states, on the authority of a celebrated surgeon of Helmstadt, that a young lady was attacked with amaurosis of one eye, in consequence of the sudden suppression of the menses, from putting her feet in cold water—and when this discharge was recalled, she fortunately recovered the sight of her eye." *Dewees on the Diseases of Females*, p. 116.

anodynes, as No. 112, page 123, and to prevent any incidental stimulus, or painful mental emotion. The diet should be nutritious, but plain; the exercise moderate; and costiveness carefully prevented by attention to diet, and by lenient warm aperients, as No. 100, or 101, page 121.

When the discharge happens to disappear suddenly in women of a full plethoric habit, the diet should be more spare then usual, regular exercise be taken, and every other day the opening draught, No. 28, page 103. When the patient is sensible of a seeming fulness of the vessels of the head, with giddiness and pain, a small bleeding or two may be advisable.

If ulcers break out in the legs, or any other part of the body at this period, they ought to be regarded as critical discharges, and the wisest practice is not to interfere with them further than is necessary to keep them clean, and prevent them from spreading; but in such cases I would advise the pill, No. 98, or 99, page 120, to be taken every other night, if not oftener.

OF PAINFUL MENSTRUATION.

Sometimes this discharge recurs every month with little or no irregularity in this respect, but it is accompanied with great local pain, which is occasionally very severe and forcing, especially about the loins, hips, and region of the womb. The quantity thrown forth may or may not be too small; but what chiefly demands our attention here, is the great pain accompanying the flow.

This pain is owing either to a deranged state of the general health, or to a spasmodic constriction of the extreme vessels of the womb itself. The former is, in my opinion, the most frequent cause. And one of the most efficacious plans of treatment with which I am acquainted, is to administer from thirty to forty, or even fifty drops of the volatile tincture of guaiacum, in milk and water, three times a day; with an aperient pill, No. 97, or 100, page 120, every other night, so that the bowels may be kept regular without being purged: or, instead of the guaiacum, the patient may take half a drachm of the powder of sarsaparilla, twice a day. I have known this of great service. At the same time, the patient ought to take much exercise daily in the open air, either on horseback or on foot; to be attentive to the rules of diet laid down under INDIGESTION; and to mingle with cheerful society. A warm bath at ninety-six degrees every other morning, will likewise be advisable; and change of air and scene will much conduce to recovery. This plan ought to be persevered in for a considerable time,

until the patient is sensibly restored to the full enjoyment of health and strength, for this is the object to be obtained by it, the accomplishment of which will very rarely fail to prevent the recurrence of pain at the future returns of this discharge.

It affords me satisfaction to perceive that the volatile tincture of guaiacum has lately been very highly extolled in this complaint by several physicians, and by none more than by the experienced American physician Dewees. He says, (*Treatise on the Diseases of Women, p.* 139,) "We could furnish very many instances of success from the use of the guaiacum,—indeed, more than an hundred." The guaiacum was many years since recommended in this volume. In my *Treatise on the Diseases of Females*, a case is related from Dewees, in which a lady who had been married nineteen years, without issue, had a fine girl in about twelve months after having gone through a course of guaiacum.

As a local means, perhaps the most useful palliative is the application of warmth to the region of the womb, and over the whole surface of the abdomen, by means of bottles filled with hot water. Warmth may also be applied, at the same time, to the feet.

If the tincture of guaiacum fail to produce any decided effect, the pills, No. 99, page 120, may be substituted for it.

If at any time the pain should be so severe as to call for immediate relief, the anodyne clyster, No. 9, page 97, should be administered.

OF PROFUSE MENSTRUATION.

This disorder may arise where there is too great a fulness of habit, and too irritable a state of the vessels of the uterus; or where both general and local debility are present. It is almost always attended with pain in the back and loins, and often with a feeling of weight or bearing down, and a sense of fulness and heat. The repeated recurrence of this complaint seldom fails to break down a strong constitution, engendering great feebleness, and thus *menorrhagia*, as it is technically called, which was in the beginning of an acute character, may soon assume the appearances of a passive or indolent nature.

The chief *causes* are luxurious living, without sufficient exercise;—or general debility, and uncommon irritability of the uterine system; or it may arise from organic mischief, or from *polypus*.

Treatment. *In the first variety*, where the symptoms are those of too great fulness, oppression of the chest, together with heat and thirst, we must prohibit the use of animal food, and

prescribe a very mild and spare diet for several days, and regulate the bowels by the use of mild saline aperients, as No. 73, or 74, page 114. At the same time, the free application of cold to the belly, loins, and back, will materially assist in checking the discharge; and the patient should take the acetate of lead pills, page 82.

In the second variety, where debility is clearly marked in the constitution, we are called upon to try invigorating means, both locally and generally. Cold hip-bathing is here indicated, with change of air, and an invigorating diet. The diet should consist of articles the most easy of digestion, and a little good Sherry or Port wine may be allowed in all cases, where it sits easy on the stomach, and does not prove heating. Friction over the loins and lower extremities will be found soothing and beneficial, and the exercise must be of the gentlest description.

The best internal medicines are zinc, steel, quinine, and sarsaparilla, combined with rhubarb, and extract of hop, hemlock, or henbane, as in the pills No. 106, 102, or 115.

Opium is of great value in cases of severe *menorrhagia*, to allay that peculiar irritability and restlessness so frequently present, and it may be given in doses of thirty drops, or more, in a saline draught. In my *Treatise on the Diseases of Females* this disorder is more fully considered, and I think every female may derive considerable benefit from the possession of that publication.

OF MISCARRIAGE.

The usual term of pregnancy is forty weeks, or nine calendar months, but the fetus (as the child in the womb is called) may be expelled at any time previous to the expiration of this period. If the expulsion takes place at any time before the commencement of the seventh month, it is considered a miscarriage; for should the fetus have completed its seventh month, and be expelled, it will often live, but very rarely survives when the exclusion occurs before that month.

Miscarriage is an accident of frequent occurrence, which is always attended with disagreeable circumstances, and which, although it seldom proves immediately fatal, may still be productive of much mischief at a future period. It may happen at any period of pregnancy, but is most frequent about the third month, proving that there is then a greater susceptibility in the womb to have its action interrupted, than either before or afterwards.

It is often preceded by a general sense of coldness, flaccidity of the breasts, slight pains in the loins, and lower region of the

belly, sometimes accompanied with fever. In full habits, and where the miscarriage proceeds from excessive action in the blood-vessels of the womb, the fever is original, and precedes the discharge. After a short continuance of those *symptoms*, a slight flow of blood ensues, coming away sometimes in clots, and at others, gushing out in a florid stream, then stopping perhaps for a short time, and again returning violently. Not unfrequently only coagulum can be perceived. When the whole contents of the womb are expelled, a bloody discharge continues for a few hours, and is then succeeded by a thin serous fluid.

Should the pregnancy have advanced beyond the third month, and miscarriage be likely to occur, there is much bearing down, together with a derangement of the stomach, causing sickness and faintness, and sometimes there is a very quick and profuse discharge of blood. In this stage, the membranes enveloping the fetus often give way, the fetus escaping with the contained water, whilst the membranes are retained for some hours, or even days. In some instances, the whole comes away entire, which is generally far better than its being excluded in parts; for, in the latter case, some portion is apt to lodge in the passage, and keep up the irritation and discharge.

But in the symptoms and duration of miscarriage, there is a great diversity in different instances. In some cases, the pains are severe and long continued; in others, short and trifling. Sometimes the bleeding is profuse and alarming; at other times, although circumstances may not be apparently very different, it is moderate or inconsiderable. A few hours in many, and not above three days in the majority of cases, is sufficient to complete the process; but we occasionally meet with instances in which it is threatened for a long time, and possibly some weeks elapse before the expulsion takes place.

Miscarriages are more or less dangerous according to the stage of pregnancy in which they happen. The farther a woman is advanced therein, the greater will be the risk, but they are seldom attended with immediate danger before the fifth month; but should they form a habit of recurrence in subsequent pregnancies, the blood, from such frequent discharges, loses its proper strength; the vigour of the constitution is broken down; all the functions of the system are in consequence performed with a considerable degree of languor; and a foundation is often laid for some obstinate chronic disease.

The *causes* which give rise to abortions, are violent exertions of strength, lifting heavy weights, severe exercise, the fatiguing dissipations of fashionable life, sudden surprises and frights, violent fits of passion, great anxiety of mind, aloetic purges, and

profuse evacuations. Whatever else tends to disturb or check the circulation suddenly, and thereby to produce fainting, will often prove a cause of miscarriage: and when once this affection has been produced, the organs with difficulty recover their elasticity, and it is extremely apt to recur upon the slightest causes.

Fulness of blood, (what medical men call plethora) is a very frequent cause, and this plethora may occur either in delicate women who live luxuriously, and use little exercise, or in those of a robust and vigorous constitution.

TREATMENT. Should the miscarriage be only threatened, and we are called upon to prevent it, the first step to be taken is a recumbent position;—the patient should be wholly confined to a couch or bed, being very lightly covered, and kept quite quiet. Should the female be strong, or full of blood, from eight to ten ounces of blood may be taken from the arm; but in very delicate irritable habits, it had better be omitted. The bowels ought to be immediately emptied by a mild purgative, as No. 27, page 118, or a laxative injection, as No. 8, page 97; after which, thirty or forty drops of laudanum may be taken, in some cold liquid, and repeated, if necessary, every four or five hours. All the drink should be cold, and the patient be kept as cool as possible. And if the constitution be very feeble or emaciated, six or eight drops of the aromatic sulphuric acid should be taken, in water, three or four times in the twenty-four hours. "Opiates," says Dr. Burns, with his usual discrimination, (*Principles of Midwifery*, *p.* 294,) "are very useful in cases of *threatened* abortion, more especially in accidental separation of the membranes and consequent discharge. They do not directly preserve the action of gestation, but they prevent the tendency to muscular contraction, and thus do good. In weakly or emaciated habits, opiates alone, if given upon the first appearance of mischief, are often sufficient to prevent abortion; and in opposite conditions, when preceded by venesection, they are of great service. Opiates are likewise useful for allaying those sympathetic pains about the bowels, and many of the nervous affections which precede, or accompany abortion. They are also of much benefit in cases where we have considerable and protracted discharge, with trifling pains, as the uterus is not contracting sufficiently to expel the ovum, but merely to separate vessels, and excite hæmorrhage. They either at once render the pain brisker, or by suspending for a time the action, it returns afterwards with more vigour and perfection, and finishes the process."

By this plan the pains from incidental causes are often checked, and the miscarriage prevented. But the remedial

process is thus far merely begun: the patient, for some weeks, must be peculiarly attentive to her diet, which should be light and sparing; and if exercise of any kind be allowed, it should be that of swinging, or of an easy carriage. Cold bathing is of great importance; and if there should be the slighest issue of blood from the parts, injections of the coldest water may be thrown up the passage two or three times a day. If the constitution be delicate, a glass or two of wine may be allowed daily, and the bitter tonic, No. 85, page 116, may be taken as there prescribed. But if the habit be vigorous and robust, no wine or tonics ought to be permitted, and the soft bed should be exchanged for a hard mattress.

It has of late been very much the custom to confine women of a delicate frame, who have once miscarried, to a recumbent position, from the first symptom of conception through the whole term of pregnancy. In a few cases this may be right; but is not, in my opinion, generally advisable, being, in the majority of instances, much more likely to hurry on miscarriage than to prevent it. A better plan is, to observe great moderation in the exercise of body and mind, with a plain diet, and regular hours, the position being generally recumbent when within doors, and strictly so for a fortnight about the time in which a miscarriage might be expected. Gentle exercise in the open air ought not to be neglected; and if the habit be delicate, a course of such tonic medicines as are found best to agree with the system may be entered upon, as No. 82, 83, 84, or 85,

But if the pains are regular, and accompanied with strong expulsatory efforts, with a considerable discharge of blood, it is not likely that the abortion can be prevented, and, in ordinary cases, all that is necessary to be done, is, to confine the patient to a bed lightly covered with clothing, and to give her five-and-twenty or thirty drops of laudanum, in a saline draught, No. 24, page 102. The saline draught may be repeated, without the laudanum, two or three times a day. Should the discharge continue but in small quantity, it is best to let it take its course. Bleeding is often had recourse to under such circumstances as the present, but is never necessary, and may do harm; for an actual miscarriage must be attended with some loss of blood, and to add to this loss by the use of the lancet, is uncalled for in strong women, and clearly improper in delicate subjects.

This discharge may, however, be in great abundance, and amount to a flooding; and the patient be faint and sinking, and in appearance ready to expire. To the inexperienced these symptoms are truly alarming; but it rarely happens that the patient does not recover in an hour or two from the fainting.

Cold, both external and internal, is here of the utmost importance; the bed-curtains should be undrawn, the windows thrown open, and a sheet alone flung over the patient; while linen wrung in cold water should be applied to the lower parts of the body, and renewed as its temperature becomes warm; withholding the application, however, as soon as the bleeding ceases. Cold injections should, in this case, be desisted from; but the parts may be tightly plugged with folds of linen, or a silk handkerchief, smeared over with oil. Laudanum is the most powerful cordial in the present instance, and is capable of even saving life when it is threatened by a very sudden and profuse discharge of blood. Dr. Hamilton, professor of midwifery in the university of Edinburgh, recommends large doses to be given; but it is seldom necessary to go beyond a drachm at a dose, which may be repeated, in case of great exhaustion, every one, two, or three hours.—See FLOODING, page 410.

Should the flooding occur after the sixth or seventh month, no time should be lost in gaining the assistance of an able medical practitioner; for it will then frequently be necessary gently to dilate the mouth of the womb, to turn the child, and to bring it away by the hand.

OF MORTIFICATION.

By mortification is meant the death of a portion of the body, while the rest continues alive, often in a sound state.

When mortification is the consequence of inflammation, there is excessive, acute, and constant pain; great anxiety; often delirium, followed by a sudden cessation of every inflammatory symptom:—the part before tense now becomes flaccid, of a livid colour, and loses its heat and sensibility; small bladders are formed, under which are perceived spots of a brownish hue; the parts acquire a fetid smell, and become black. If the event prove favorable, the mortified portion becomes completely circumscribed; a process of ulceration is set up in the contiguous living substance, by which the dead matter is separated, and at length cast off in sloughs. If, on the contrary, the termination be fatal, the mortification rapidly extends, great constitutional irritation arises, the pulse becomes small, rapid, and irregular, there is great anxiety and prostration of strength, and death soon ensues. Such are the symptoms of mortification arising from violent inflammation.

But this affection is frequently the effect of a debilitated state of the constitution, where there is no sensible degree of inflammatory action present; and then there is often considerable irritation in the system, but not generally the excessive pain

above mentioned, and much less fever. Sometimes, little or no pain or fever attends, especially when gangrene occurs in elderly persons.

The *most usual causes* of the first variety of mortification, are excessive inflammation induced by whatever cause; severe external injury, as contusion, fracture, &c.; a high degree of erysipelas. A peculiar condition of the constitution often disposes to it.

The second variety generally originates in debility, from age, habits of life, disorder of the digestive organs, fever, poor living, foul air, improper food, scurvy, depressing remedies, cold, &c.

Gangrene and mortification are frequently used synonymously; but, correctly speaking, the former is an incipient mortification, in which the affected part becomes soft, of a brown livid colour, and loses more or less of its natural warmth and sensibility; the latter is a perfect *sphacelus*, or death, when the part becomes a cold, black, fibrous, senseless substance.

Treatment. When gangrene seems to be threatened from the violence of inflammation, soothing remedies are the best, and those which tend to allay irritation in the general system, and arrest the inflammatory action that may still exist in the part. A mild mercurial purge, as two grains of calomel, combined with three grains of compound extract of colocynth, should, therefore, be given at night, to restore the defective secretions of the intestinal canal, and the cooling draught, No. 26, page 102, with the addition of fifteen drops of laudanum, through the day. Or, instead of this, the effervescing saline draught, No. 24, with three grains of Dover's powder, may be taken every four hours, during the day. In addition to these remedies, soothing applications must, at the same time, be made to the affected part, such as poppy fomentations, and poppy poultices, applied *moderately warm*. Leeches are also proper, and a small bleeding from the arm, when the inflammation occurs in strong healthy subjects, living in the country. Such are the means proper when inflammation threatens to terminate in gangrene.

But if the gangrene has actually commenced, a mild antiseptic poultice must be immediately laid over the part; and one of the best that can be used, is made by stirring a sufficient quantity of oatmeal, or linseed-meal, into stale beer grounds; or the yeast poultice, No. 3, page 96, may be resorted to. A port wine poultice, made by stirring oatmeal into good port wine, is also sometimes of eminent utility in these cases. The poultice should be applied moderately warm, and renewed every six or eight hours, and every time it is removed, the parts may be fomented with a warm spirituous fomentation, made by boiling

four ounces of oak bark in three pints of water, for fifteen minutes, and just before using it, adding to it three ounces of camphorated spirit of wine. At the same time, medicines to support the living powers of the constitution must be given, and the best are ammonia, united with opium, or musk, and sulphate of quinine. Sir Astley Cooper says, that the exhibition of ammonia with opium, is the best means of supporting the constitution in these circumstances, and recommends from seven to ten grains of the carbonate of ammonia, with twenty drops or half a drachm of laudanum, to be taken, in camphor mixture, every four hours. Another excellent medicine is six or eight grains of the carbonate of ammonia, and ten grains of musk, made into a bolus with conserve of hips, and given every three or four hours. This has been much praised in cases of gangrene from local injury. Bark was also formerly much employed, but modern practitioners have little confidence in it, and consider it to be sometimes even injurious. The sulphate of quinine, however, is frequently of great service, especially when symptoms of considerable debility are present. It is sometimes employed with marked advantage in mortification following erysipelas, provided suitable evacuations from the bowels have been premised at a proper period. A two-grain pill of this substance may be taken every four hours. Serpentaria also often proves very useful.—See page 76.

The diet in all cases of mortification must be nourishing, but care must be taken not to overload the stomach. A certain quantity of good wine, proportioned to the patient's strength and habits, and the symptoms of the complaint, is proper. Broiled mutton or lamb chops, and fresh eggs lightly boiled, are very suitable; and water, impregnated with carbonic acid gas, must be taken as the common drink. The acid gas is sometimes of the highest efficacy in mortification.

After great want of circulation in any part, from the course of the blood having been arrested, sloughing sores are very apt to occur. On this kind of gangrene, Sir Astley Cooper remarks,—

"Thus, after the operation of tying the great artery of the thigh, if the limb be suffered to rest in the same position for a considerable time, a small gangrenous spot frequently appears. In such cases, the spirit of turpentine is the best application. Yeast is often applied with the same view. A lotion much used in the other hospital, for this purpose, is made by mixing together an ounce of confection of roses, two drachms of honey of roses, two drachms of tincture of opium, and the same quantity of extract of lead, *(liquor plumbi subacetatis.)* This is an application which accords extremely well with limbs in a state of gangrene, when the dead are separating from the living parts. During the sloughing process, the nitric acid lotion is the best application that can be used: therefore, when the gangrene stops, and the line of demarcation is drawn,

and the sloughing process is commencing, the nitric acid lotion may be employed in the proportion of fifty drops to a pint of water."—*Lectures on Surgery, by Sir Astley Cooper, No.* xv.

In the mortification of the toes, or other extreme parts of the body, occurring in old people, antiseptics are required locally, and, internally, cordials and tonics. The port wine poultice, mentioned above, should be laid over the part affected, the part being first well rubbed with the liniment, No. 45, page 106, and opium and ammonia, given internally, with which must be combined a generous diet as already advised. Mr. Pott used to give a grain of crude opium every three or four hours, in the mortification of the toes of elderly people. From the languid powers of circulation in advanced life, these cases frequently prove fatal, especially in those who are tall, and those who have lived luxuriously.

Mortification arising from poor living, improper food, and depressing remedies, will require the same treatment as now recommended when it occurs in old persons.

In gangrene following exposure to extreme cold, the parts should be very gently rubbed with snow, or the coldest water, for some time, and then with camphorated spirit of wine. When the first effects of cold are removed by these means, cold poultices of stale beer grounds, yeast, or port wine, should be applied; and opium and ammonia may be given internally. In these cases, great care must be taken not to bring the patient into a warm room until the parts affected have recovered themselves a little. For a remedy in mortification occurring in tropical climates, see page 8.

OF MUMPS.

The mumps is a painful tumour of the parotid glands of the neck, which often extends to the maxillary glands, and is conspicuous externally.

The tumour, though sometimes confined to one side of the neck, more usually appears on both; it is at first moveable, but soon becomes diffused to a considerable extent. It increases till the fourth day, and often involves the maxillary glands in the inflammation, is evidently contagious, and often epidemic. After the fourth day it gradually declines; and, for the most part, there is but little fever, or need for medical aid. As the swelling of the throat subsides, it not unfrequently happens, that a swelling takes place in the testes of males, and in the breasts of females; which is by no means an unfavorable sign; for it has occasionally been found, that where this sympathy has not been manifested, or the glandular swelling has been sud-

denly repelled, the symptomatic fever has been greatly increased, and delirium has ensued.

The cause has just been stated to be a specific contagion.

TREATMENT. I have already remarked, that the mumps do not often require the assistance of medicine. All that is in general requisite is, to keep the head and face moderately warm, to avoid taking cold, to observe a mild diet, and to open the bowels by a very gentle aperient, as No. 74, page 114.

In cases of mild fever, eight or ten grains of compound contrayerva powder, with two or three grains of nitre, may be given in water every night. On the other hand, should uncommon languor supervene without much fever, eight or ten grains of aromatic confection should be given two or three times a day in water, instead of the remedies before mentioned. It is not necessary to keep the patient in bed, unless the fever is considerable.

When the testes and breasts simply enlarge, they ought not to be interfered with; but should they be very painful, and tend to suppurate or break, cooling purgative medicine, as No. 73, or 74, should be given, a few leeches be applied, and afterwards a warm poultice.

In case of high fever occurring, with other alarming symptoms, the usual means of reducing inordinate vascular action by bleeding, purging, &c. must be resorted to.

Should any hardness be left in the glands after recovery, they ought to be anointed freely with the liniment, No. 42. page 91.

OF GENERAL NERVOUS DISORDER.

Weakness and irregular action of the greater part or whole of the nervous system is now so common, as to render it necessary for me to say a little on the subject of nervous disorder in general, without adverting here to any determinate nervous affection, which is treated of under its respective title.

Palsy and epilepsy, with several other complaints which may be enumerated, are, in the majority of instances, strictly nervous maladies, but being determinate forms of this class of diseases, they are separately noticed under those heads. What I refer to here is, a general weakness and derangement of the nerves, the *symptoms* of which are well known to most delicate people in a greater or less degree. They are depression of spirits; timidity and irresolution; general irritability and restlessness, accompanied frequently with such an uncomfortable state of feeling, as is more easily conceived than described; often pain in the head, and shooting spasmodic pains in various

parts of the body; restless nights; and general languor and debility.

The *chief causes* of nervous debility are, a sedentary or luxurious mode of living; extreme anxiety; severe and protracted application to business or literary pursuits; the excessive use of calomel, or other mercurial preparations; costiveness; great disorder of the functions of the digestive organs;—and, indeed, whatever greatly enervates the general system.

We frequently meet with persons in a low nervous condition, whose case requires the exercise of consideration and discernment, in order to ascertain whether their malady be really nervous, or the result of some positive but latent disease. A principal feature to be attended to is, that the purely nervous patient is always worse in the morning, and gradually grows better as night approaches, being then more cheerful and active, and often able to sit up to a late hour with much satisfaction and enjoyment. On the contrary, the individual who is labouring under some concealed disease of a particular part, is invariably more light and comfortable in the morning, but grows feverish, fatigued, and restless towards night. It should be added, however, that when there is considerable muscular as well as nervous debility, arising, for instance, from simple disorder in the digestive functions, patients often grow fatigued and feverish towards night, although there may be no positive mischief in any part of the frame.

Treatment. Perhaps the most common causes of general nervousness, are costiveness, mental anxiety, and a deficiency of active exercise in the open air of the country; and, therefore, the two principal points of attention are, the proper regulation of the bowels, so that they may be exonerated daily without irritation, and the quitting of sedentary habits, and a crowded city, for active exercise in the open country air, to which we would add, a nutritious diet, and studiously avoiding every source of debility. Striking advantage is often gained in this complaint from obviating costiveness, the means of accomplishing which are pointed out at page 340. The use of ipecacuanha powder, the clyster machine, or the alkaline solution, &c. as there directed, proves frequently of great value to the nervous patient troubled with habitual costiveness, or disorder of the stomach and bowels, and I can confidently recommend them to their attention, used in conjunction with daily exercise abroad. When these means are tried, and they seem to call for the assistance of a suitable tonic, in order to render the benefit obtained from them still more satisfactory and permanent, the patient may take also the pills, No. 102, 103, or 106, page 121, during the day: or the following mixture, which

is strongly recommended by Sir Astley Cooper, and the effects of which he states to be sometimes truly astonishing in improving the condition of the nervous system. But let the patient never lose sight of the necessity of regulating the bowels by mild measures, and of resorting to daily exercise.

Take of carbonate of ammonia, half a drachm; spearmint-water, or camphor mixture, five ounces and a half; compound tincture of cardamoms, half an ounce.—Mix, and take three table-spoonfuls twice or thrice a day.

When it is found necessary to have recourse to direct aperients, the pill, No. 100, or 101, page 120, will be found very suitable; one may be taken every other night. Daily friction with the flesh brush, over the region of the stomach and bowels, and all the large joints, and early rising, must make a part of the general plan. The friction must be performed by the patient himself. The diet should be nourishing and easy of digestion, as advised under INDIGESTION; and warm rooms, hot beds, and every thing which is relaxing, must be studiously avoided.

So valuable is constant exercise and pure air in the cure of general nervous disorder, that a celebrated foreign physician accumulated a large property from his success in the treatment of such affections by these means.* He was in the habit of imposing long rides or walks every day, with early rising, so that his patients were fully exercised, but short of any particular fatigue; by which practice he insured a keen appetite, perfect digestion, refreshing sleep, and regular bowels, and by degrees gave an abiding tone to the nerves and muscles of every part.

In conclusion, I would warn nervous persons against allowing the abstraction of blood, either by leeches, cupping, or the employment of the lancet, for the relief of pain in the head, or other parts with which they are generally more or less afflicted. Active purging in delicate habits is almost equally improper. These are practices too often recommended, in such cases; but they can seldom fail to prove highly injurious. Instead of them I advise friction over the part, or, if that fails, a warm plaster, and considerable exercise. Cold sponging the whole body, or the cold bath, is often of uncommon service.

* If my memory is correct, this was Dr. Tronchin, of Geneva, whom the unhappy infidel Voltaire sent for in his last illness, and whom he besought with extreme earnestness and anxiety to prolong his existence, if possible.

OF NETTLE-RASH.

This is an eruption resembling that produced by the stinging of nettles; whence its name. The rash often appears instantaneously, especially if the skin be rubbed or scratched, and seldom stays many hours in the same place, but vanishes and again makes its appearance in another part of the skin. The parts affected with the eruption are often considerably swelled, and a troublesome itching is invariably present.

The cause may be either mechanical irritation, or acidity and other disorder in the stomach.

It is usually a very mild disease, and rarely requires any medicine beyond a cooling purgative, as No. 27, or 28, page 103. Should the feverishness at night be considerable, the draught, No. 24, page 102, may be taken, or five grains of James's powder in a pill; and if the rash frequently returns, particular attention should be paid to regulate the bowels, and allay irritation in the stomach. In such a case, the pill, No. 98, page 119, may be taken every night, with a glass of soda-water, into which six or eight grains of magnesia is put, twice a day; the bowels being kept free from confinement by an occasional pill, No. 100, page 120, if the magnesia has not the desired effect.

OF NEURALGIA.

This is a class of affections which consists chiefly in acute pain in some part of the body, and have their site in the *nerves*, since the pains present follow the course of these, but of the precise nature of which we are ignorant. There are many species or varieties of *neuralgia*, for example, *tic douloureux*, *sciatica* or hip gout, &c. are varieties of this affection, but I have introduced the present article, chiefly for the purpose of noticing *neuralgia of the lungs*, and *of the heart*. In neuralgia we cannot discover any constant lesion of the solids, nor evident alteration in the fluids, and must therefore consider the disorder to be one of the nervous influence. In these cases, dissection has afforded variable results: frequently no diseased condition of the nerve affected has been found; sometimes it has been found smaller, at other times larger than natural; and in some rare instances, the sheath or envelope of the nerve has appeared red from injection of its vessels.

It cannot be doubted, that there are two sorts of *neuralgia*, very different from each other in almost every respect, and yet too apt to be confounded. The one proceeds or arises from a local and circumscribed cause, which may, in some cases, be

removed by a surgical operation, or by magnetism. The other appears to depend upon a constitutional cause, that is, upon great derangement of the general health, and is treated successfully only by attention to this derangement. The latter species is usually seated in some of the most superficial nerves, returns at irregular intervals, induces little or no change in the appearance of the part affected, either during life, or when examined after death, and may, therefore, be supposed to have a constitutional or systematic origin, and not merely a local and circumscribed one. Some persons consider neuralgia to be dependent upon an inflammatory state of some portion of the nervous system, but I do not consider this correct.

1. *Neuralgia, or nervous pains in the lungs.* It is by no means rare to meet with individuals who, without any physical or rational sign of organic disease, and sometimes even while enjoying the most perfect health in other respects, suffer acute pain, occasionally even extremely acute pain, in the interior of the chest. This pain may be momentary or of long duration, intermittent or continued, confined to one spot or diffused, fixed or moveable; and sometimes it shoots by fits along the walls of the chest and the neighbouring parts, in the course of the intercostal and anterior nerve of the chest, or the congeries of nerves in the arm-pit. It is frequently deep-seated between the spine and shoulder-blade.

It is worthy of notice here, that many young women are very subject to pain in the side, about the middle of the false ribs. This is commonly connected with some derangement in the health, and sometimes with more or less lateral curvature of the spine. Bleeding is by no means proper in this affection, which is most certainly removed by those measures which tend to invigorate the system, and establish the general health.

2. *Neuralgia, or nervous pains in the heart.* Sometimes these pains are confined to the region of the heart, but frequently they extend at the same time, or vicariously, over a greater or less portion of the lungs and stomach. Sometimes they exist simultaneously in the superficial nerves of the neck, and extend along the tract of the branches supplied by these to the anterior parts of the chest; still more frequently at the very time they are felt most severely in the heart, they shoot with corresponding violence along the nerves of the arm-pit, and more particularly along the nerve of the arm to the elbow; and sometimes as far as the fingers, simulating the organic affection called *breast-pang*, or *angina pectoris*.

It is of consequence to observe, that this affection sometimes so strongly resembles the organic disease called *angina pectoris*, as to require the aid and exercise of considerable judgment to

distinguish one from the other. This fact should inspire the patient with hope, and induce calmness and composure, and it should lead the medical practitioner to offer his opinion cautiously, and with some reservation in the majority of instances. Neuralgia is met with much more frequently in some years than others, and it seems that the prevalent type of disease influences its development.

TREATMENT. Whatever has the greatest effect in invigorating the system, and restoring all the functions of the body to a state of healthy action, will be almost uniformly of the greatest service in the treatment; so that we should be guided therein by the principles laid down under CHRONIC DISEASE, (page 300,) and employ the remedies therein referred to, and also under INDIGESTION. Of local remedies, either magnetism,* galvanism, or electricity, will be found the most useful. "When the pains are fixed, (says the late able French physician, M. Laennec,) I have frequently relieved them by the long-continued application of two magnetised steel plates, disposed in such a manner as to throw the magnetic current existing between them, through the affected part." See the case mentioned under HICCUP.

OF NIGHT-MARE.

This is certainly a nervous affection, in which there is a violent struggle and tremor, with a severe pressure on the chest. The sensation is frequently preceded by some fearful dream, as that of an implacable enemy, known or unknown, in close pursuit of the dreamer, from whose grasp he feels incapable of escaping; or of exposure to some overwhelming danger.

It appears most frequently in persons of an irritable or nervous temperament, and of a weakly constitution; particularly amongst those who are predisposed to low spirits. Others, indeed, are occasionally affected by it, but more rarely, and perhaps in a less degree. The most usual exciting causes, are great fatigue of body or mind; indigestible food; and long-continued disorder of the stomach and bowels. It may often be looked upon as a certain indication of deranged health.

TREATMENT. The treatment is very similar to that directed for indigestion. The mind and body should be kept free from all undue fatigue and commotion; the diet be light, and especially towards evening; and the bowels be preserved regular by the occasional use of the pills, No. 100, page 120.

* Although magnetism has fallen into contempt in England, it is well known that the Commission appointed by the Royal Society of Medicine in Paris, in 1775, to investigate its effects, published a very favorable report of them.

If the stomach and general habit are weak, and the appetite deficient, the patient should take the carbonate of iron pills, No. 102, recommended for nervous disorder, or the quinine pills, No. 115; with very considerable daily exercise on foot or horseback. In all cases, the supper must be very simple and small in quantity, animal food being then altogether avoided.

OF PAIN IN THE STOMACH.

The pain of the stomach here adverted to is often of frequent though uncertain occurrence. It is quite unconnected with inflammation, being purely of a slow chronic character. In some persons, the pain is moderate; in others excruciating, and of a very depressing nature. The stomach may feel empty, or distended, and sometimes there are bitter or saltish eructations. The more excruciating sort of pain scarcely ever exists with pain in the head; and in such cases, the moment it ceases the the patient is often as well as he could wish. This is not the case in CHRONIC GASTRITIS, noticed at page 515.

The *causes* of this complaint are sometimes obscure, but it is generally owing to a peculiar weakness and disorder of the stomach; and indigestible food, anxiety of mind, great fatigue of body, costiveness, and exposure to wet, are the most frequent exciting causes of the pain.

When neither vomiting nor emaciation prevails, it is very seldom a dangerous complaint.

TREATMENT. A very good plan of treatment is to take a draught containing volatile alkali, magnesia, mint-water, and tincture of henbane, three times a day; with moderate exercise in the open air, avoiding excessive fatigue, and injurious exposure to damp and wet. A rigid animal food diet should at the same time be adhered to in bad cases, little vegetable food whatever being taken, except a little plain biscuit, or bread, occasionally. All slop fluids, as tea, soup, &c. must be avoided, but a little good white wine, or brandy and water, may be taken every day, if they do not disagree. In very severe cases, it will be absolutely necessary to be exact in following this plan, in order to obtain a cure. The alkaline draught above referred to is as follows:

> Take of pure water of ammonia, ten drops; calcined magnesia, five grains; peppermint water, an ounce and a half; tincture of henbane, a drachm.—Mix, for a draught, to be taken three times a day.

If this medicine does not produce all the effect desired, it

may be changed for *the sulphate of quinine*, or *the oxide of bismuth*, (page 10,) which are sometimes of excellent use.

Take of sulphate of quinine, twenty grains; extract of gentian, a sufficient quantity to make fifteen pills. One to be taken three times a day.

When the pain is so severe as to demand immediate relief, opium will often be found of inestimable advantage; but it should not be forgotten, that it is only a palliative, and that we must look to the above plan for effecting a cure. To procure speedy relief, from fifty to a hundred drops of laudanum may be given in a little peppermint water, and repeated in an hour if necessary. Or, from sixteen to forty drops of the black drop may be taken in the same way: this is less likely to affect the head than laudanum.

The oxide of bismuth is justly considered one of the most efficacious medicines in this complaint, but it is with this, as with many other chronic affections, they are often most effectually treated on the principles laid down under CHRONIC DISEASE IN GENERAL, page 300. Thus I have found the following pills persevered in for six or eight weeks, or more, of superior service:

Take of powdered rhubarb, twenty-five grains; powdered ipecacuanha, fifteen or twenty grains; Castile soap, half a drachm; syrup, a sufficient quantity to form the mass, which is to be divided into twenty pills; one of which is to be taken twice a day, with one of the pills No. 99 every night, each of these last pills containing four grains of extract of hemlock.

OF PALPITATION OF THE HEART.

Palpitation is a vehement and irregular motion of the heart. It is sometimes sharp and strong, in which case it is called a *throbbing* of the heart; and sometimes soft and feeble, when it is called a *fluttering* of this organ. The rebound of the heart against the inside of the chest is sometimes so very strong as to be distinctly heard, and to agitate the bed of the patient so violently, that his pulse has been counted by looking at the motions of the curtain of the bed.

Palpitation is frequently found at the pit of the stomach, (which professional men call the *epigastric region*), when it appears to proceed from some particular excitement of one of the large arteries passing through that part, the heart being unconcerned in its presence.

Palpitations of the nervous kind are frequently much more troublesome than those connected with organic lesion. The former far from being removed by the most complete repose,

are in general felt to be most distressing during the first part of the night. It frequently happens that they prevent sleep for several hours, while a moderate degree of exercise proportioned to the patient's strength, removes, or at least alleviates, the distressing feeling of them.

Its *causes* cannot always be satisfactorily ascertained, but it may be simply a nervous affection, dependent upon an excessive irritability of the muscular fibres of the heart, or large arteries; or the effect of positive disease in those or other parts. Pope Urban the Eighth was troubled with this complaint, and after death his heart was found ossified in its general substance. Great disorder of the digestive functions is a very frequent cause of this complaint, especially in excitable patients.

Its *exciting causes* are violent emotions of the mind, costiveness, and other disorders of the digestive organs, and excessive exercise of body or mind. It not unfrequently follows acute rheumatism.

I have known a disease in the rectum, or last gut, accompanied with stricture, produce a severe and long continued palpitation. Great weakness and disorder of the stomach and bowels is a frequent cause in those cases which are curable.

TREATMENT. Our first object should be to endeavour to ascertain whether the palpitation be owing to general debility, a peculiar irritability of the nervous system, or indigestion; or to an enlarged or otherwise diseased state of the heart, or its vessels. In the first case, tonics and antispasmodics, with quietude of mind, regular hours, light meals, pure air, and such daily exercise as agrees with the individual, will almost always produce much relief, and sometimes effect a radical cure. The best tonics are the carbonate and sulphate of iron, or of zinc, ammoniate of copper, sulphate of quinine, and ipecacuanha. The most useful antispasmodics are the extracts of henbane and hemlock, and Battley's solution of opium.

An efficacious plan, in such cases, is to take, during the day, the carbonate of iron pills recommended under NERVOUS DISORDER, with an aperient pill, No. 100, or 101, page 121, every other night, or so as to preserve the bowels in a lax condition: the diet and air being such as I have advised for indigestion. The exercise should be of the gentlest kind in the beginning. Sometimes a cold bath, or a tepid bath at ninety-two degrees, two or three times a week, will be found a useful auxiliary. If the carbonate of iron pills do not agree, they may be changed for the sulphate of quinine, No. 115, page 124, or for the ammoniate of copper, prescribed under EPILEPSY.

If we have reason to apprehend some positive affection of the structure of the heart, or larger blood-vessels, the probability

of cure is much lessened, and the great dependence must be upon mild mercurial alteratives, with the warm bath at ninety-five degrees, issues, rest both of mind and body, food of the easiest digestion, and pure air. Perhaps no mercurial alteratives can be found better than those marked No. 98, or 99.

Whatever may be the cause of the disease, if the palpitation is more than ordinarily troublesome, some mild narcotic should be taken to allay the irritation. From ten to twenty or thirty drops of Battley's sedative liquor of opium, or the solution of acetate of morphia, may be taken in a little mint-water, every second hour, till relief is obtained; or from five to fifteen grains either of the extract of henbane or of hemlock, may be administered in the same manner.

If the palpitation is connected with a very full habit of body, the loss of a small quantity of blood may occasionally be of service; but this fulness of blood is almost invariably much more safely and effectually removed by a spare diet and purgatives.

Even should the complaint be severe and obstinate, we ought never to be hasty in deciding upon any positive disease of the heart, or any of the larger organs closely associated with it, nor upon any incurable cause whatever; for it has not unfrequently happened, that a palpitation of long standing, and which has been regarded as of a dangerous kind, has gradually subsided. Dr. Cullen, of Edinburgh, has given a striking case in confirmation of this remark, in the eighth chapter of the second part of his Materia Medica:—"A gentleman," says he, "pretty well advanced in life, was frequently attacked with palpitations of his heart, which, by degrees, increased both in frequency and violence, and thus continued for two or three years. As the patient was a man of the profession, he was visited by many physicians, who were very unanimously of opinion, that the disease depended upon an organic affection of the heart, and considered it as absolutely incurable. The disease, however, after some years gradually abated both in its frequency and violence, and at length ceased altogether; and since that time, for the space of seven or eight years, the gentleman has remained in perfect health, without the slightest symptom of his former complaint."

The palpitation in the *epigastric region*, that is, in the pit of the stomach, at the end of the breast bone, is in fact a strong pulsation of the aorta, or some other large artery in that part, and is by no means of unfrequent occurrence. As the late Dr. Baillie's remarks on this subject contain my own sentiments, both as to the symptoms, progress, and treatment of the affection, I cannot do better than transcribe a part of them into this

page, especially as his observations thereon are very generally approved by the best informed in the profession.

"I have been frequently consulted," he says, "within the last fifteen years, respecting a pulsation which is distinctly felt in the epigastric region. When the patient first discovers this pulsation he is generally greatly alarmed, and he has seldom found much comfort from the opinion given him by his medical attendant concerning its nature. From a good deal of experience in cases of this kind, I am enabled to state, that the increased pulsation of the aorta in the epigastric region, very rarely depends on any disease of the aorta itself, or of its large branches in that place; and that this occurrence is almost constantly of very little importance. In the course of my experience, I recollect but one instance in which such a pulsation depended on a diseased swelling of the artery.

"In many instances, it is, perhaps, difficult to ascertain the causes of this pulsation; but, in most cases, it will be found to be connected with an imperfect digestion, and an irritable constitution. When it has once taken place, I believe it seldom subsides entirely. However, it does not produce much inconvenience, more especially when the mind has ceased being anxious about it; and a person may continue to live with this symptom or complaint just as long as if it did not exist."

In regard to the treatment of this complaint, Dr. Baillie has observed, that whatever improves the digestion, and renders the constitution less irritable, will be of use in mitigating the increased pulsation; and that it is useful to remove the patient's anxiety respecting this disease, where it can be fairly done. Therefore, the best treatment in such cases is that advised for INDIGESTION, and under CHRONIC DISEASE IN GENERAL.

OF PALSY.

Palsy is a diminution, or total loss of the power of motion and sensibility in certain parts of the body, but without that oppressive sleep witnessed in apoplexy. Sometimes the powers of voluntary motion alone are affected in any considerable degree, while those of sensation are only rendered a little more obtuse; at other times, however, both kinds are equally torpid, and sometimes several of the faculties of the mind participate in the debility, though they are never so completely lost as in apoplexy.

There are three varieties of the disease, the hemiplegic palsy; the paraplegic palsy; and the local palsy. In the first, the disease affects only one side of the body; in the second, it is confined to the lower part of the body on both sides; and in the third, to particular limbs.

Palsy usually comes on with a sudden though slight loss of the power of motion in the parts affected, which is frequently preceded by a numbness, coldness, and paleness, and sometimes by convulsive twitches. In some cases, this loss of motive power continues to increase till it becomes complete; in others, it is stationary and partial. When the head is much affected, the

eye and mouth are drawn on one side, the memory and judgment are impaired, and the speech is indistinct and incoherent. If the disease affects the limbs, and has been of long duration, it not only produces a loss of motion and sensibility, but likewise a considerable flaccidity and wasting away in the muscles of the parts affected.

The progress of the disease is uncertain; and depends very much upon the state of the nervous system at the time of the attack. If there be no chronic debility, or other morbid condition of the brain, the patient will sometimes recover entirely in a week, or even less; but if this system, or some particular part of it, be in an infirm state, he recovers only imperfectly; and obtains, perhaps, a thorough or a limited use of the lower limb, while the upper remains immoveable; or he is compelled to pass through the remainder of a painful existence with only one half of his body subservient to his will.

The paralytic state of the lower limbs generally depends upon a diseased affection of the spine, in its bones, ligaments, or interior. In such examples, there is at first nothing more than a slight numbness in the lower limbs, with an appearance of stiffness or awkwardness in the motion of the muscles; these symptoms increase by degrees; there is a great difficulty in walking, and an inability in preserving a balance; the aid of a staff, or the arm of an assisiant, is next demanded; and the urine is often found to flow in a feeble stream, or perhaps involuntarily. The bowels are first always costive; but as the sphincter of the anus loses its power of contraction, the motions at length pass off involuntarily. The disease may continue for years, and either terminate in recovery, or the patient may at last sink from general exhaustion.

Palsy is frequently the consequence of a fit of apoplexy; and all the *causes* of apoplexy may give rise to this disease, though no apoplectic fit actually precedes it. These causes are compression on the brain from the effusion of blood, tumours, or induration of the membranes: the circumstances predisposing to this disease being, advanced age, corpulency, fulness and grossness of habit, an inordinate indulgence in wines and heavy fermented liquors, excessive heat, and whatever tends to relax and enervate the system.

All its varieties more generally appear in the aged and infirm, than in the young and robust; and the left side is, perhaps, more frequently affected than the right.

It will be easily *distinguished* from apoplexy by contrasting the symptoms of the two diseases.

Treatment. As in all other complaints, the treatment proper for this disease will depend on the age of the patient, and

the state of the constitution. If the age of the patient is not far advanced, and the habit full, bleeding and purging are generally proper in the commencement, and they are particularly indicated when the head is much affected. In such a state, fourteen or sixteen ounces of blood should be directly taken from the jugular vein, or temporal artery; the saline purgative, No. 28, page 103, being given so as to act freely on the bowels; then quietness should be enjoined, and as little exercise of body as possible. Plain food should be given, and but little of it. If the first bleeding and purging afford only partial relief, they may be repeated to the same extent without delay, in robust habits: the quantity of blood drawn being always regulated by the strength of the patient, and the degree in which the symptoms approach to those of apoplexy.

But if the age be considerable, the habit debilitated, and the pulse feeble and intermitting, we shall in general do better to abstain from the use of the lancet, and give the purgative, No. 28, as above advised. If the constitution be very weak, a warmer purgative than this will be advisable, as No. 97, page 119. The purgative should be repeated once or twice a day, according to its effects, for the first four or five days.

Having proceeded in this course for a short time, if it succeeds, the patient may soon recover; but should it not succeed, and the disease prove obstinate, we are called upon to endeavour to re-invigorate the brain, and nervous system in general, by means of stimulants, both external and internal. Electricity and galvanism, warm bathing, leopard's-bane, sumach, vomic nut, and moxa, are the most powerful stimulant remedies in palsy.

Numerous cases have been cured, or greatly benefited, by the judicious use of electricity or galvanism, and unless there are symptoms which contra-indicate their employment, they should never be neglected, when other remedies fail. They are more likely to be useful in palsy connected with general debility, than when it occurs in full habits. Some physicians recommend galvanism as superior to electricity in palsy.* Dr. Bardsley, of Manchester, says, that he has found it succeed, when the latter has failed.

In weakly habits, warm bathing is sometimes useful, especially the natural warm waters of Bath and Buxton; but in persons who are full of blood, they are much less useful, and should be used with caution.

The leopard's-bane *(arnica montana)* has been a good deal

* Mr. La Beaume, of No. 31, Southampton Row, Russell Square, is a very able Electrician, who gives his whole attention to its correct application, and is worthy the confidence of all those who wish to try the effects either of Electricity or Galvanism.

praised by some continental physicians, and is worthy of trial. It is said to be particularly useful in palsy of the bladder, and in local palsies of the organs of sense. But the sumach *(rhus toxicodendron)* is, perhaps, much more beneficial. Dr. Alderson, of Hull, employed it with success in twenty-four cases. He began with half a grain or a grain of the powdered leaves three times a day, and gradually increased it to five or six grains, or till he found a sense of tingling produced in the paralytic part, accompanied with some degree of twitching or convulsive motion.

The vomic nut *(nux vomica)* is another medicine which has been useful in some instances. Dr. Fouquier, of Paris, and other French physicians, speak well of it. Four grains of the powder may be taken three or four times a day, and increased to sixteen or twenty grains, its effects being carefully watched: —or it may be taken as advised at page 81. It seems of most service in sanguine habits, where there has been a good deal of general strength, and energetic health, after irritation has been allayed, and the pulse brought down to a subdued and temperate state, by means of blood-letting, purgatives, and a mild spare diet. When the head is soon affected by small doses, it is rarely of much use.

The leopard's-bane, sumach, and vomic nut, are very active medicines, and, therefore, must be employed with great caution.

Turpentine, guaiacum, camphor, mustard, horse-radish, garlic, and other stimulating medicines of the same kind, have commonly been employed in palsy, but are only applicable to those instances in which debility prevails, and then they are occasionally beneficial. Under such circumstances, the volatile tincture of guaiacum may be taken to the extent of fifty or sixty drops, three or four times a day, either on sugar, or in milk and water: or two, three, or four tea-spoonfuls of mustard seed may be swallowed thrice a day. Either of the stimulating liniments, No. 39, or 45, page 105, may be rubbed freely over the parts affected, at the same time. The application of moxa is worthy of a trial in severe cases.—See page 59.

In palsy of the lower limbs arising from a disease in the spine, the most effectual remedy is a large issue, made as near as possible to the diseased part of the spine, which must be kept open for a great length of time.

If the palsy arises from the use of lead, or exposure to its fumes, the means pointed out under DEVONSHIRE COLIC must be resorted to, and the palsied arms supported in splints and a sling.

In debilitated subjects, especially after the disease has lasted some time, the diet should be nutritious, but mild, and moderate in quantity.

The preceding directions for the treatment of palsy are those authorized by the best informed physicians of this country, but we ought, I think, to regard palsy commonly, if not universally, as a loss of the power of motion and of sensibility in certain parts, depending on deranged general health. We should, therefore, consider what are the best means of re-establishing the general health and strength, rather than to search after medicines or means of a supposed specific character, which is a practice far too commonly indulged in, both in this and other chronic maladies. My experience leads me to believe that a treatment founded on this view is not only the most efficacious, but the only one which will succeed well in the majority of instances. —See CHRONIC DISORDER, page 300.

SHAKING PALSY is noticed as a distinct complaint.

OF PILES.

The piles consist in a distention of what are technically called the hemorrhoidal veins; or in a relaxation of the surrounding skin and cellular substance, with an effusion of blood into it, forming small tumours, either within the anus or its verge, or sometimes producing one tumid ring, by which it is surrounded.

In some cases, they are attended with a discharge of blood, particularly when the patient goes to stool, called the bleeding or open piles; in others, there is no discharge, when they are denominated the *blind piles*. Sometimes they are situated within the gut, and obtain the name of *internal piles;* but more frequently they protrude beyond the anus, (or fundament,) and are called *external piles.*

They are sometimes preceded by a sense of weight in the back, loins and bottom of the belly, together with uneasiness of the stomach, and flatulency in the bowels; on going to stool, a pungent pain is felt in the fundament, and small tumours are found to project beyond its verge. If these break, a quantity of blood is voided, and a considerable relief from pain is obtained; if they continue unbroken, the patient experiences great torture every time he goes to stool, and feels an inconvenience when sitting down on any hard seat.

Frequently, however, the *symptoms* are not so severe as this, but are, notwithstanding, very troublesome, as the patient is from time to time annoyed by a relaxation of the skin about the anus, and the formation of a small tumour, which is apt to increase, and be very painful, when the patient is walking, or standing long. The tumour will sometimes bleed, at other times it will not.

Piles which bleed but little, are not of much consequence;

but those which bleed profusely, cause violent pain, or induce inflammation and its effects, demand the greatest attention.

General debility, and habitual costiveness, are the *most frequent causes* of piles. They may likewise be produced by hard riding; fulness of blood; excessive indulgence in heating liquors; the use of aloes; the suppression of long accustomed discharges; and the pressure of the pregnant womb.

Persons who lead sedentary lives are those most subject to this complaint, as such a mode of living renders the bowels sluggish in their action, weakens the whole intestinal canal, produces internal obstruction, and enervates the general habit.

TREATMENT. As the piles are generally owing to costiveness, and weakness of the bowels, one of the best plans of treatment consists in keeping the bowels in a lax condition, by means of some very mild aperient, such as sulphur combined with lenitive electuary, and after this has been used for two or three weeks, and any accumulation of excrement removed, a suitable warm aromatic or stimulant, as black pepper, or balsam of capivi, should follow. The brimstone and lenitive electuary is one of the most proper aperients in this complaint, for it clears the bowels without irritating them; and the aromatics recommended gently stimulate the bowel, and give it tone.

Take of flower of brimstone, two drachms; lenitive electuary, an ounce; nitre, in powder, one drachm; syrup, a sufficient quantity to make the whole into an electuary. A tea-spoonful should be taken once, twice, or thrice a day, so as to keep the bowels gently open.

After using this for a short time, take the following as directed, still constantly preserving the bowels free from confinement, by the brimstone electuary, (the confection of black pepper of the London Pharmacopœia.)

Take of best black pepper, in powder, elecampane root, in powder, of each, an ounce; sweet fennel seed, in powder, three ounces; best honey, best loaf sugar, of each, two ounces.—Mix well the first three ingredients, after which the honey and sugar, melted together over the fire, and formed into a clear syrup, are to be added, and the whole beaten into a mass. The dose is the size of a nutmeg, three times a day, with a glass of water or white wine.

Or instead of this paste, the patient may take thirty or forty drops of balsam of capivi, twice or thrice a day, either on sugar or in water. This balsam seems to be of most service in piles which occur in delicate persons, and depend upon relaxation of the parts.

Together with the use of the above internal medicines, the patient may apply locally, twice or thrice a day, the ointment No. 89, or Sir Henry Halford's pile ointment, No. 96, page

119, or the lotion, No. 72. In many cases, the latter ointment or the lotion, will be found very efficacious. If any inflammation exists in the part, the patient should apply cold water freely before using an ointment.

In almost all cases of piles, whether occurring in strong or weakly habits, the pain and irritation present are much relieved by the free application of cold water; and also by gently pushing the piles up within the grasp of the sphincter muscle, with the fore finger, when they are situated externally. If the heat and irritation are very severe, the immersion of the parts in a bidet of cold water should be resorted to, and will afford the most grateful relief. Generally speaking, the use of cold water is far more beneficial than warm fomentations; but now and then the latter are found of most service, when, of course, they should be preferred.

If the above plan of treatment is not attended with satisfactory relief, the sulphate of quinine pills, No. 115, page 124, may be taken twice or thrice a day, at the same time. In weakly persons, this medicine is sometimes of considerable service as an auxiliary to the foregoing measures.

But should the piles occur in strong persons, from hard riding, excess in heating liquors, or other causes, the black pepper paste would not be proper, in consequence of its heating qualities, nor will the balsam of capivi be often of service. In such instances, the objects are, to preserve the bowels in a lax condition by the occasional use of the brimstone electuary, or the mixture, No. 73, or 74, page 114, and to allay the inflammation locally by the liberal use of cold water, after applying eight or ten leeches to the parts. Rest, and the horizontal position, should be observed, together with a mild vegetable diet, until the inflammation has subsided. Here leeches are sometimes very beneficially employed, but they are seldom proper when the complaint occurs in weakly habits.

Now and then persons of a strong constitution are frequently troubled with the present complaint, although they are temperate in their habits, in which case, the best remedies are, the brimstone electuary, with a dose of the mixture, No. 74, occasionally, cold water being applied to the parts as often as occasion requires, and once a day, or once in two days, the pile ointment, No. 96, page 119. In point of diet, every thing heating and constipating must be avoided. It is in habits of this description, that the piles are sometimes salutary from the discharge attending them, and when this is the case, that discharge must be moderated, but not altogether checked.

In the open piles should the bleeding be profuse, the coldest water must be constantly applied to the parts, with pressure by

means of cloths dipped in cold water. But there is, perhaps, nothing which so directly stops the bleeding, as putting the piles up within the grasp of the sphincter muscle, which may almost always be readily done by gentle pressure with the finger.

Sometimes patients mistake some other disease about the last gut for the piles, and whenever there is any doubt upon the subject, the advice of an attentive and well-informed surgeon should be taken without delay.—See *Stricture of the Rectum.*

The most efficacious means of preventing a recurrence of the piles is, to keep the bowels free from confinement by some mild opening medicine, and attention to diet and exercise, now and then resorting to a little black pepper paste, or the balsam of capivi. Strong persons, who have a great deal of blood flowing in their veins, may take with advantage a little Epsom and Glauber's salt occasionally, as No. 27, page 103. The excision of these excrescences is, however, the most certainly radical cure. It may be performed either by ligature, the knife, or scissors. Some surgeons advise the use of the ligature; others recommend the knife. The opinion of the majority of the most able surgeons is in favor of excision by the knife, but they are sometimes led to prefer the ligature. The cutting off of these excrescences, by means of the scissors, is a very simple and safe operation, and a mode of relief which well merits the attention of every one suffering much from this complaint.

An opinion has commonly prevailed, that the bleeding from piles is of a salutary or critical nature, but this is more frequently false than true. In weakly persons, of a confined habit of body, they are very generally a symptom of unsound health, and ought to be cured in the way advised. In robust patients, however, and those who are full of blood, the bleeding piles are sometimes useful; and clearly so, when any complaint, to which the patient may have been previously subject, is either removed, or lessened in severity, on their appearance. In such instances, as I have just remarked, they should be moderated, but not altogether checked, which is likewise to be observed when they appear in the place of some other, and long-accustomed discharge, as bleeding from the nose, &c.

OF PLEURISY.

The symptoms and treatment of pleurisy, or inflammation of the membrane lining the chest, and which is called the pleura, are so much like those noticed under inflammation of the lungs, as to render it quite unnecessary for me to treat of the former affection separately, and I, therefore, refer the reader to the article on inflammation of the lungs for the usual symptoms

and correct treatment of pleurisy. Indeed, many of the most able physicians assert, that the two diseases cannot ordinarily be distinguished with certainty from each other during the life of the patient, and all agree that they do not materially differ in their treatment.

But there is a BASTARD or SPURIOUS PLEURISY which might be mistaken, by inexperienced persons, for the true acute pleurisy, and which I think it proper briefly to notice. This bastard pleurisy is an inflammatory affection of the muscles covering and passing between the ribs, which produces an acute pain of the side, increased on inspiration. It is distinguished from the true pleurisy, which is an internal affection, by being attended with little or no fever, and scarcely with any cough; and by the increase of pain which always takes place on movement of the chest, or any exertion causing the contraction of the inflamed muscles.

The bastard pleurisy seems to be a sort of rheumatism; yet it sometimes spreads internally, occasioning the true pleurisy.

The most effectual means of removing it is, to foment the part affected with hot water, and to take a pill, composed of a grain of calomel, a grain of opium, and three grains of James's powder at bed time, which may be repeated every night, or even twice in the twenty-four hours, till the complaint is cured. At the same time, the bowels should be opened by some mild aperent, as No. 74, page 114, or No. 100, or 101, page 121; and the feet kept warm and dry. If these means fail, a blister may be applied to the chest, and the above calomel pill continued.

OF POLYPUS.

Polypus of the womb is an important, and not an unfrequent complaint, and is considered at length, in a place more suitable than the present publication, viz. in my *Treatise on the Diseases of Females*. I shall here make a few remarks respecting *Polypus of the Nose*.

There are different kinds of polypus: the principal are the *fleshy polypus*, a red, soft, and sensible swelling, free from pain, like a piece of healthy flesh; the *gelatinous polypus*, a softer, semi-transparent tumour, of a pale yellowish colour; and the *hydatid polypus*, which generally occurs in young people, and the cysts of which may be burst by pressure, and the fluid in them discharged. These are *benign* polypi. The *malignant* polypi are hard, scirrhous, and painful: the *cancerous polypus* is a disease of old age, and there is a malignant polypus called *fungoid*, that is, of a *fungous* character.

The *causes* of this disease are involved in some obscurity. My opinion is, that there must be supposed to exist in the constitution a disposition to some local malady, and the nasal membrane being in such instances peculiarly disposed to assume a deranged action, extraneous matter is thrown out, or an extraneous growth is seen, which constitutes the disease called *polypus:* or, should there be no disorder of the constitution, there must still be a local disposition to this form of affection, and local agents may give rise to it, or at least strengthen the disposition, so as to bring it fully into action.

Treatment. This disease when *benign*, is usually treated either by extracting it with *forceps*, which is the most common and proper method, or extirpating it by means of a *ligature*. Of course the most able surgeons should be consulted in such a case. It requires sometimes strong powers of discrimination to distinguish whether a polypus is fit for an operation.

In most cases, the patient will find advantage from an alterative course of medicine, in which I would recommend particularly the sarsaparilla or dandelion, with the pill, No. 98, or 99, page 120, every or every other night; following, at the same time, the rules in regard to diet and regimen, recommended under Indigestion.

Under Tumours, the patient may read a valuable case of swelling in the left nostril, cured by sarsaparilla.

OF PUTRID SORE THROAT.

The putrid or malignant sore throat differs from the common quinsy in being attended with a darker crimson redness of the throat, spreading ulcerations of a dark foul appearance, greater general debility, and from the accompanying fever being a typhus. It is also strongly contagious, and frequently epidemic.

The *symptoms* of this disease are numerous and complicated; but the attack often differs but little from that of simple fever, the patient complaining of lassitude, dejection of spirits, giddiness, and shivering alternated with fits of heat,—the pulse is frequent, and the breathing more or less hurried. There is soon a sense of stiffness in the neck, with hoarseness of voice, and sore throat; when, upon inspection, the whole internal fauces appear of a fiery red colour; this soon changes to a dark red, and becomes interspersed with a number of specks, of some shade between a light ash and dark brown. In some cases, the first appearance which the throat (properly the fauces) assumes, is that of a large whitish-coloured stain, surrounded by a florid margin; the stain soon becoming an extensive slough. The tongue is covered with a thick brown fur; the inside of the lips

is beset with vesicles, and a thin acrid matter distils from the mouth and nostrils, excoriating the neighbouring parts; there is often a looseness, and sometimes a constant discharge of an excoriating fluid from the anus; considerable fever attends, with an obvious evening exacerbation or increase; a small, frequent, irregular pulse; prostration of strength; stupor or delirium;—yet often, even when the disease terminates fatally, the patient is free from these symptoms, and continues to walk about until a few hours before his death.

About the second or third day, a scarlet eruption appears about the neck and face, and, by degrees, becomes dispersed over the whole body; after continuing for about four days, it departs with a desquammation of the outer skin. But it sometimes happens, that the putrid sore throat appears without any eruption on the skin, which is in general an unfavorable occurrence.

In the worst cases, the sloughs corrode deeper and deeper, and spread throughout the whole alimentary tube,* or to the windpipe; the symptoms of irritation continue to increase; incipient mortification supervenes; a severe purging comes on; and the patient expires. Death usually takes place before the seventh, often as early as the third or fourth day.

If the breathing be much affected, it proceeds from the inflammation spreading to the windpipe, which is unfavorable. Fierce delirium affords us reason to believe that the inflammation has spread to the brain.

A florid colour of the eruption on the skin, with an uniform diffusion, and copious desquammation, is favorable. When the disease takes a favorable turn, the countenance begins to lose that peculiar expression, so characteristic of the worst forms of the disease; the pulse becomes stronger and less frequent; the breathing freer; the skin, from being parched, becomes soft and often moist, one of the most favorable symptoms; the evening increase less remarkable; and the discharge from the intestines and nostrils, if it still continues, less acrid.

It generally arises from a specific contagion. The *chief predisposing causes* are, a weak and relaxed habit of body; childhood; a moist and warm state of the atmosphere; and the autumnal season. Adults, as well as being less subject to it, generally have it in a milder form.

It is sometimes epidemic, and may last for months; when it is most fatal on its first appearance, gradually becoming milder, till towards the end of the epidemic it is scarcely attended with any danger.

* The alimentary tube, or canal, includes the internal surface of the gullet, stomach, and intestines, that is, the whole space from the beginning of the gullet to the anus.

Treatment. Cleanliness, pure air, a free ventilation, and fumigation with the nitrous acid vapour, are here of the utmost importance, and united with the use of strong antiseptic gargles, and the internal administration of wine, muriatic acid, and bark, are the means most to be depended upon for conducting the disease to a successful issue. At the commencement of the malady, emetics are likewise very beneficial, and the bowels should be gently opened. If, then, the disease be in its first stage, an emetic of twenty grains of ipecacuanha powder, and a grain of emetic tartar, should be given directly, and its operation promoted by the patient's drinking of warm water. After this operation is over, the bowels ought to be moved by the aperient mixture, No. 73, page 114, and a strong antiseptic gargle employed immediately. Those substances which are possessed of a pungent, aromatic, and antiseptic nature, with little of an astringent quality, are best fitted for the formation of gargles in this disease; and, perhaps, there is no single article equal in these respects to Cayenne pepper. To make this gargle, six or eight drachms of the tincture of capsicum may be mixed with eight ounces of infusion of roses; or twenty grains of the best capsicum berries, bruised, may be infused in six ounces of boiling water, to which may be added half an ounce of tincture of myrrh. Another excellent gargle is made by adding one drachm of muriatic acid, and an ounce of tincture of myrrh, to six ounces of infusion of roses. All the gargles should be warm, and used frequently. But it is often impossible to make children, the most frequent subjects of this disease, use a gargle, which is a very perplexing circumstance, as its greater fatality among such patients is in a great measure to be attributed to the difficulty of cleansing their fauces, and to their swallowing the putrid secretion from the throat. In such circumstances, the acrid matter must be removed, from time to time, by a small sponge at the end of a stick, and by means of another sponge, at the other end, all the ulcerated parts must be afterwards touched with a mixture, composed of two drachms of muriatic acid, mixed with twelve or fourteen drachms of honey of roses, taking care not to excite swallowing.

The patient's linen must be frequently changed, the windows and doors opened, and pure air freely admitted, and fumigation with the nitrous acid vapour often resorted to. This vapour is disengaged by putting half an ounce of sulphuric acid into a china saucer, or any other suitable vehicle, and sprinkling into it, from time to time, a little nitre, the china saucer containing the acid being warmed over a lamp, or put into heated sand. Several of these vessels may be placed in the apartment, and the passages leading to it, at twenty or thirty feet

distance from each other. Dr. Willan has remarked, that the refreshing antiseptic vapour, detached by this process, and circulated through the room, presently clears the patient's throat, and at the same time removes the fetor both of the breath and perspiration.

After the above means have been employed, the internal administration of the mineral acids, bark, and wine, must be had recourse to without delay, and all that has been said respecting their use in typhous fever is applicable here, since the general means to be employed in putrid sore throat are precisely the same as advised in typhus. At the commencement of the disease, the fever sometimes runs high, with a hot and dry skin, and flushed face, when it will in general be proper to delay the employment of the bark till these symptoms are relieved, as otherwise it may prove too heating; and instead of it to give the muriatic acid, which is a powerful tonic, and may always be given much earlier than either the bark or wine. From five to eight drops of this acid, (and the dose may be increased to twenty drops,) combined with three drops of laudanum, may be given, in two ounces of water, every three hours; and a wine-glassful of the best Port wine be administered as often.

The carbonate of ammonia in frequent and active doses is an admirable medicine in this complaint, and may be used as early as the mineral acids. See SCARLET FEVER.

But should the complaint be rather advanced, and the symptoms of general excitement reduced, then bark and wine should be taken in as large doses as the stomach will bear. Dr. Good, of London, who was a physician of much observation and experience, and deservedly of high authority as an author, judiciously remarks, that "time is here every thing: if we make no progress in the first thirty-six hours, we may tremble for the event; if we lose ground in twenty-four hours, we shall have to hope against hope." Women, unaccustomed to wine, have taken it successfully under this disease in the proportion of two bottles a day for more than a fortnight. It is a good practice to combine the bark with muriatic acid in such cases.

Take of best Peruvian bark, in powder, from fifteen to thirty grains, or of sulphate of quinine, two grains; decoction of Peruvian or infusion of serpentaria bark, two ounces; muriatic acid, six or eight drops; tincture of opium, three drops.—Mix for a draught, to be taken every three hours.

If the patient is asleep, he should be waked, so that he may not be suffered to rest for a period of three hours at a time, without a fresh dose of this medicine.

Children can seldom be prevailed upon to take the bark in sufficient quantities to be very useful, and when that occurs,

the sulphate of quinine (see page 77) should be substituted for it. This sulphate may be given in doses of a grain or two, every third hour, made into pills with extract of gentian, or dissolved in water, with the addition of six or eight drops of muriatic acid to each dose. Indeed, in the case of adults, as well as of children, afflicted with this disease, the sulphate of quinine will be found the most eligible mode of administering the bark.

Dr. Willan recommends the oxygenated muriatic acid as a tonic of very superior value in this disease, and there can be no doubt of its being an efficacious antiseptic. It may always be got pure at Mr. Garden's, Chemist, Oxford Street. The dose is half a drachm, or a drachm, three times a day, in cinnamon water.

The Cayenne pepper has often been used internally with advantage, especially in tropical climates. A Dr. Stephens exhibited it with good effects, during an epidemic which prevailed at St. Kitts in 1787, to four hundred patients, and it seemed to save some whose state was thought desperate. Two table-spoonfuls of the small red pepper, or three of the best sort of common Cayenne pepper, and two tea-spoonfuls of fine salt, are to be beat into a paste, on which half a pint of boiling water is to be poured, and strained off when cold; an equal quantity of very sharp vinegar being added to this infusion, a table-spoonful of the mixture, every half hour, is a proper dose for an adult, and two tea-spoonfuls for a child. Of course, wine will be proper in the intervals, and in large quantities, as already advised.

Should a profuse looseness arise, it must be restrained by mild opiates and astringents, as No. 127, page 126, or three grains of compound ipecacuanha powder, united with twelve grains of extract of catechu, and given every second hour till the diarrhœa is checked.

Vomiting seldom proves obstinate in this disease, and the best mode of treating it is to give the effervescing saline draught, No. 24, page 102. If that is not effectual, half a grain of opium and three grains of camphor may be made into a pill, with conserve of roses, and administered every two or three hours.

All spontaneous bleedings are unfavorable in putrid sore throat, and must be checked as speedily as possible. The application of cold water, and of a cold astringent lotion, as No. 68, page 113, must be as free as it can be made, without risking too great a diminution of heat; and considerable doses of alum and sulphuric acid, must be given internally, say fifteen grains of powdered alum, with forty drops of the diluted sul-

phuric acid, in three ounces of the coldest water. This draught may be repeated every hour.

If the urine is suppressed, it is here generally a symptom of debility. Either warm fomentations, or cold wet cloths applied over the region of the bladder, are the most advisable means of removing this affection. Or a mild clyster of sweet oil and warm gruel may be injected. The invigorating plan should be pushed as far as possible.

In endeavouring to support the patient's strength, our principal dependence must be upon the free use of wine, bark, and the mineral acids; but preparations of arrow-root, sago, tapioca, and the like, may also be frequently given, if the patient will swallow them. His ordinary drink should consist of Port wine negus, acidulated with orange-juice.

The putrid sore-throat being highly contagious, especially among children, it will be prudent, on the first appearance of the disease, to separate the sick from the rest of the family; and it is absolutely necessary that the excrement and urine, together with the discharge from the patient's mouth, should be removed from the house directly they are voided.

OF RHEUMATISM.

This complaint naturally divides itself into two species, the *acute* and *chronic* rheumatism, which, as they differ, in some measure, in their symptoms and treatment, I shall treat of separately.

OF ACUTE RHEUMATISM.

Acute rheumatism consists in pain, inflammation, and fulness, usually about the larger joints and surrounding muscles,—symptoms which often wander from one part to another; the urine depositing a red sediment, and the accompanying fever being inflammatory.

It is the disease which some persons call *rheumatic fever*, and which others, very erroneously, denominate *rheumatic gout*. I have known even medical men of respectability call it by the latter name, a convincing proof that they know not what they are about.

The acute rheumatism usually commences with languor, chilliness succeeded by heat, thirst, restlessness, and a quick pulse; there is also a sense of weight, coldness of the limbs, and confined bowels. In the course of a day or two, inflammation, with acute pain, tumour, and tension, makes its appearance in one, or more, of the larger joints of the body. The pain is frequently transitory, and apt to shift from joint to joint, leaving

the part previously occupied, swollen, red, and extremely tender to the touch. The pulse now becomes full and hard; the blood, when drawn from a vein, is cupped, exhibiting the inflammatory surface; the tongue preserves a steady whiteness; the bowels are commonly very costive; the urine high-coloured; and often there is a profuse sweating, unattended by relief.

Sometimes, however, the pain is the first symptom, and the fever follows. When the pain is not very severe, and confined to a few parts, the fever is slight; when it is severe and felt in many parts, the fever is more considerable, and it is most so when the pains extend over the whole body. Both the pain and fever generally suffer an increase in the evening, and a remission towards morning. The pains are much increased on the slightest motion requiring the action of the muscles affected, and are most severe, as well as most apt to shift their place, in the night-time. The fever abates sooner than the local symptoms, and is rarely protracted beyond a fortnight or three weeks. The pains, for the most part, are the last symptom which leaves the patient. They often begin to abate about the eighth or tenth day, but generally continue, with more or less severity, to the thirtieth or fortieth. Sometimes they continue for months, or even years; and it is very uncommon for them to disappear before the twentieth day.

Cold or damp applied when the body is heated, is the *most usual cause*; and the young and vigorous, and those between the age of puberty and thirty-five, are most subject to it. It is more frequent in the beginning and towards the end of winter, than at any other season.

Persons who are full of blood are frequently attacked by it, and whatever occasions a sudden fulness of habit may be ranked among its exciting causes.

The only disease with which it is liable to be confounded is gout, which see. The gout is preceded by more evident symptoms of indigestion; comes on more suddenly; attacks the small joints; and has not so strongly marked an increase of the fever and other symptoms at night, as we witness in acute rheumatism.

Treatment. The chief remedies in the inflammatory or acute rheumatism are, blood-letting, mild purgatives, diaphoretic or gentle sweating medicines, but more especially calomel, opium, and emetic tartar combined, bark, and the wine of meadow-saffron; and, if they are skilfully employed, they are very generally equal to insuring a satisfactory termination of the disease in a moderate time. In the commencement, the fever is in general considerable, and sometimes violent, and should it be in its onset very violent, and the patient strong and

plethoric, he should be bled from the arm to the extent of from ten to sixteen ounces, which may be repeated if necessary. A mild purge, as a dose of the mixture, No. 74, page 114, or the draught, No. 27, page 103, should follow the bleeding, and may be continued every morning for the first six or seven days.

But the sheet anchor of the practitioner here is, a grain and a half of calomel, combined with a grain or two of opium, and a grain of James's powder, or a quarter of a grain of emetic tartar, and made into a pill with a little conserve of roses, which is to be given every night, at bed-time.* This pill will often be called for night and morning, or even thrice in the twenty-four hours, by the severity of the pain. It relieves pain and inflammation, and sometimes has uncommon influence in shortening the term of the disease. If the patient should be peculiarly susceptible to the action of opium, it will often be better to give only a grain in this pill, especially in the commencement of a very acute attack, or the muriate of morphia may be tried.

In respect to blood-letting, it ought to be observed, that it should not be employed for the purpose of relieving pain, when the general excitement does not warrant it. It is the state of the fever only which is to direct us in the use of the lancet, the abstraction of blood in acute rheumatism being always proportioned to the violence of the fever. It must also be regulated, in a great measure, by the age, strength, and habits of the patient, and his residence, whether in town or country, ought likewise to be considered. If the patient be young and vigorous, two or three bleedings will generally be followed by much relief, if the first abstraction of blood is not found sufficient, and the repetition of the blood-letting will be still more necessary and useful when a free and luxurious mode of living is added to youth and strength. And patients who enjoy the advantages of a healthful country residence, will bear bleeding in this disease much better than those who inhabit populous cities, or marshy districts. Upon the whole, the employment of the lancet is seldom proper after the fifth or sixth day, and at no time when the fever is abating, although the pains should become worse.

After the disease has been treated in this way for a week or ten days, the wine of meadow-saffron may be administered, should the pains still continue severe. This medicine is not

* "In acute rheumatism, in which my experience has led me to discard bleeding, unless the patient be of a very strong, sanguine temperament, I know nothing that proves more serviceable than a combination of one grain of calomel, a quarter of a grain of emetic tartar, and from one to two grains of opium."—*Dr. A. T. Thomson's Elements of Materia Medica, vol.* ii. *p.* 496.

applicable to the beginning of the complaint, but towards the decline it is frequently of much service in allaying pain and inflammation of the joints; but it must not be used very freely. Forty or fifty drops of it may be taken in any agreeable vehicle. twice a day, when the pain is violent; or it may be taken in the following form:

Take of solution of acetate of ammonia, half an ounce; wine of meadow-saffron, forty drops or half a drachm; syrup of poppies, a drachm; camphor mixture, an ounce.—Mix for a draught, to be taken every six hours, while the pain requires it.

When the fever has been subdued by the foregoing means, and some days have elapsed from the first attack of the malady, the best course is, to give the opening medicine recommended above, three or four times a week, continuing the pill of compound ipecacuanha powder just noticed, through the day, with the calomel pill at night. Or, instead of the compound ipecacuanha pill, the Peruvian bark may be administered. It has been praised by some physicians of the highest authority, among whom are Sir Edward Hulse, Dr. Fothergill, and Dr. Fordyce, as being capable of alone curing the severest cases. It is, no doubt, often an admirable medicine after the first seven or eight days, the hardness of pulse and fever having been reduced, and an abatement of the symptoms begun to be perceived. In such cases, fifteen or twenty grains of powdered bark may be taken every three hours. One of the most striking cases of quick recovery, clearly obtained by medical treatment, in an acute disease, which I ever witnessed, was the cure of a very violent attack of the present complaint by the Peruvian bark. The patient was a young man, about thirty years of age, who, when I first saw him, had been confined to his room by inflammatory rheumatism for about ten weeks. He had been largely bled, and purged, and had sweated profusely, yet the symptoms, at the end of ten weeks, seemed to be almost as violent as ever, although he had occasional remissions of two, three, or four days' duration. The night I commenced my attendance he was in a great deal of pain, confined to his bed, sweating profusely, and through every covering, with a pulse full, quick, and throbbing, but not hard, and his friends were much alarmed for his safety. His physician had seen him two or three hours before, and wished to have him bled again; but the family not liking that, he ordered a large dose of a sweating powder, which, however, was not given. On visiting him, I ordered the bark, in doses of fifteen grains of the powder every four hours, which was immediately commenced, and continued in the same quantities for near a fortnight. The next day he was sensibly much better, the pains were greatly re-

lieved, the perspiration was removed, and never again returned, and by degrees his appetite and sleep became good; in short, he grew evidently better and better every day, and in less than a fortnight took a journey of nearly a hundred miles without sustaining the least injury.

Now, I should generally order the sulphate of quinine in preference to any other form of giving the bark, as from its agreeing so remarkably well with the stomach, it is likely to be still more beneficial. The proper dose here is two or three grains, three times a day.

Within the last week, (December 1831,) I have met with a very severe case of acute rheumatism, in a man of about forty-five years of age, with the following symptoms: considerable difficulty of breathing, and great pain and oppression in the chest, so that sometimes in endeavouring to expectorate he seemed in danger of suffocation; great pain and stiffness in many other parts of the body, but especially in the left elbow, wrist, and hand, which are much inflamed, and so swollen as not to permit the least motion; tongue furred; pulse hard, full, and not less than one hundred and twenty in a minute; very restless nights; no appetite; urine very high coloured and depositing considerable sediment. He had been confined to his bed for a fortnight. The following pills were prescribed with the most sensible and striking advantage; in a few hours he lost the oppression and pain in the chest, and his pains generally were greatly mitigated; the perspiration diminished, and in a week he was able to rise from his bed. In a former attack, having had only parish attendance, he was confined to the house five months. I introduce the prescription here as it is an invaluable one, both for acute and chronic rheumatism. The case being very urgent, this man took one pill every six hours, night and day, for two days and a night; the next three days he took one pill thrice a day, and afterwards for five days, one night and morning. He had no other medicine. In chronic rheumatism, one pill regularly night and morning for a week, and afterwards every night for a fortnight, will usually be quite sufficient.

Take of calomel, ten grains; tartar emetic, one grain and a half; powder of gum guaiacum, twenty grains; compound powder of ipecacuanha, twenty grains.—Mix, and by means of conserve of hips, make them into a mass, and divide into ten pills.

Any local application to the swollen and inflamed joints is rarely of service in acute rheumatism, though frequently beneficial in the chronic species. In the former case, the simplest topical applications are the best, such as fomentations with lukewarm water, or the use of the mixture of spirit of wine and camphor mixture, noticed under acute gout, at page 419, after

the fever has abated. For any stiffness or chronic pains left in the joints after the disease has been removed, bathing the parts twice a day with lukewarm salt and water, and then rubbing them once a day with a stimulating liniment, as advised under *Gout*, will generally be the most effectual means of removing those symptoms. When convalescent, the patient should likewise resort to moderate exercise, both within doors and in the open air; and, if his strength will permit, a walk of several miles, every other day, will be found of eminent service in restoring use to the limbs, and perfecting the recovery.

The diet ought to be spare in the commencement, and throughout the disease mild and diluting, consisting chiefly of milk whey, and the usual farinaceous decoctions, as barley-water, toast-water, thin gruel, &c. As he becomes convalescent he must gradually return to a more nourishing diet of animal food, eggs, bread, biscuit, &c. in the manner described at page 428. The temperature of the patient's room should be as uniform as possible, and of a moderate warmth. Some think he should be laid in blankets, but that is, in general, improper.

Though the bark may not have been used in the active stages of the disease, it will be found in its decline a useful tonic in expediting and perfecting a return to the patient's former health and strength.

OF CHRONIC RHEUMATISM.

The *chronic* rheumatism differs from the *acute* in being attended with little or no fever or inflammation, the chief symptoms being pain and swelling in the large joints, and in the course of certain muscles. The former is clearly a disease of debility; the latter is an inflammatory complaint.

The chronic species becomes fixed most frequently in the loins, hip, knee, and ankles, but every large joint is liable to its attacks. The general heat of the body seldom exceeds its natural temperature, and the pulse is rarely quicker than eighty strokes in a minute; the joints are swollen, but not to so great a degree as in the acute species, being of a pale hue, cold and stiff, roused with difficulty to perspiration, and always comforted by the application of warmth.

The same *causes* give rise to this and to the acute species; and violent strains and spasms will cause chronic rheumatism where the constitution is peculiarly disposed to the malady.

Treatment. I have just remarked, that it is a disease of debility, and the mode of treatment must be founded on this idea. Bleeding and purging, therefore, ought not to be thought of here; the most efficacious remedies being those which are of a warm balsamic nature, and which promote the insensible per-

spiration; such are guaiacum, sulphur, turpentine, camphor, cajeput oil, mustard, and the compound ipecacuanha powder. Local stimulants are likewise often of great service, more especially the stimulus of Galvanism or Electricity.

In the whole catalogue of medicines recommended for the relief and cure of chronic rheumatism, there is none more appropriate and useful than the compound ipecacuanha powder, (especially if sulphur be taken in the day,) for it is eminently serviceable in relieving the pains, disposing to sleep, and keeping up a gentle and salutary discharge from the skin, which of all others is the evacuation affording most benefit in cases of this description. Four grains of this powder may be made into a pill with a little extract of gentian, and given three or four times a day; about a quarter of a grain of aloes being added to each pill, to prevent costiveness. At the same time, the affected parts may be rubbed thrice a day, for a quarter of an hour, with one of the liniments, No. 41, 45, or 46, page 107; the painful joints being always wrapped in flannel. If the pains are very severe, and the patient's general health appears deranged, a grain of calomel, two grains of James's or of the antimonial powder, and a grain of opium, may be made into a pill with a little conserve, and taken every night at bed-time. This pill will sometimes be found of great value. In addition to these means, a tepid bath at ninety-five degrees should be used every other morning, for about half an hour or forty minutes; or a trial be given to the air-pump vapour bath, if within the patient's reach.

Next in efficacy to the above ipecacuanha powder is, I think, the volatile or ammoniated tincture of guaiacum, which may be tried in doses of thirty, forty, or fifty drops, every four hours, dropped on sugar, or taken in milk and water. The liniment being applied locally, and the calomel pill taken at night, with the warm bath occasionally, as just advised.

A very good plan of treatment is to give a scruple of sublimed sulphur in milk and water, thrice a day, unless the bowels become much affected by it, when it should be taken less frequently,—with a Dover's powder pill to relieve pain as often as may be required, and the pill of calomel, James's powder, and opium just noticed, every night. In some cases of this disease, the pain is so extremely severe as to require the free use of opium, and then we should not be afraid of its liberal employment, and instead of one grain of powdered opium being used in the night pill just recommended, we may give two grains.

If these fail, the oil of turpentine may be taken internally, and is sometimes very useful.* Half an ounce of this oil may

* "In chronic rheumatic pains of the hips (*sciatica*) and muscles of the loins (*lumbago*) the *spirit of turpentine* is among our most efficacious remedies. Home states, (in his

be mixed with an equal quantity of sweet spirit of nitre, of which mixture a tea-spoonful, three times a day, in the infusion of cloves, is the proper dose.

Should the complaint prove particularly obstinate, which is not uncommon, I would recommend a trial of the following pills, instead of those made with the compound ipecacuanha powder alone.

Take of best compound ipecacuanha powder, thirty-six grains; extract of hemlock, prepared in vacuo, one drachm; best gum guaiacum, in powder, twenty-four grains; socotorine aloes, in powder, four grains.—Mix, and divide into twenty-four pills. Two or three to be taken three times a day.

Of course the liniments before recommended, with the calomel pill at night, and the warm bath, must not be neglected while taking these pills.

The arsenical solution is a medicine which has been highly praised by Dr. Bardsley, of Manchester, and others; but, from its activity, it ought not to be used till the foregoing remedies have failed of success. It is, in general, of no use in recent cases, and in young persons; but in the long-standing attacks of old subjects, it will sometimes perfectly succeed after every previous expedient has failed. See what is said of this medicine at page 4.

The meadow-saffron has been much extolled of late years by some respectable practitioners. It does not, however, appear to me so well adapted to the *chronic* as to the *acute* species; and what has been said of it under the article on GOUT, is likewise true of its use in the present disease. If it be used moderately, and in conjunction with the other approved remedies here noticed, it will often be of much service; but if trusted to alone, and incautiously employed in large quantities, it can hardly fail to be injurious; in such large quantities, it will, undoubtedly, mitigate the patient's sufferings, but it will also weaken his stomach, and disturb his digestion. Thirty or forty drops of the wine of meadow-saffron may be taken, twice a day, mixed with five grains of magnesia, and two ounces of water.

The local stimulants of most service here, are the strong liniments mentioned at page 106, the burning of moxa, and Electricity or Galvanism. Whatever liniment is applied to the affected parts, it should be rubbed in frequently, and with active

Clinical Observations and Experiments) that he cured five out of seven cases of sciatica with this article. Within the present year, I succeeded completely in removing a violent and protracted case of this affection by the turpentine, given in doses of twenty drops with a scruple of *lac sulphuris* three times daily."—*Eberle's Practice of Medicine, vol.* 1. *p.* 385. The able author of these remarks seems to have forgotten for the moment, that the *milk of sulphur* is in itself an invaluable remedy for chronic rheumatism, and we may well be at a loss to determine which had most to do with this cure,—the milk of sulphur or the turpentine? I think the sulphur is the more powerful remedy.

friction, by the patient himself. The friction can hardly be too long continued at one time, or too frequently resorted to, for it has alone wrought wonders in desperate cases. Dr. Balfour, of Edinburgh, has published a useful book on the good effects of friction and compression in rheumatism, in which he relates numerous examples of its efficacy in the worst cases. Admiral Henry, of Rolvenden, in Kent, was almost a cripple from a very protracted attack of chronic rheumatism, and he cured himself by the steady use of friction alone. Besides the hand, he employed small pieces of wood, rounded at the top, with which he used to rub and compress the stiff and painful parts. In severe and obstinate instances, I would strongly urge a trial of moxa, which has sometimes been very successful in removing stiffness and pain in inveterate forms of this malady. For the manner of using it, see the directions at page 59.

Electricity, in the form of aura or sparks, or in slight shocks, is worthy of much confidence; and the same may be said of Galvanism.

The operation of Galvanism is more soothing and agreeable to most persons than that of Electricity, and, perhaps, is commonly more efficacious here. It has, undoubtedly, effected great and salutary changes in this painful complaint, and ought not to be neglected if the more common plans of treatment fail.

The vapour bath is also of eminent service in many cases. It may be used at about one hundred and ten degrees, once or twice a week. By promoting a free perspiration it greatly relieves the internal parts.

The air pump vapour bath has been found of remarkable service in many extreme cases of chronic rheumatism, even when accompanied with stiffness and contraction of the joints and muscles, and after the vapour bath, applied in the usual manner, had failed to produce any beneficial effects. The air-pump bath is a local application to the parts immediately affected, and combines the powers of the most effectual fomentations with those of dry cupping; so that by removing the weight of the atmosphere from the injured parts, and promoting a free perspiration at the same time, it resolves obstruction, imparts a freedom to the local circulation, and effectually assists nature in her efforts to change the diseased condition of action present, for one that is healthy. If the case requires it, it may be used alternately with Galvanism, and these remedies united, are, in some obstinate cases, much more efficacious, than either of them employed alone. See what is said of the air-pump vapour bath at page 148, and in M. La Beaume's Essay on this bath.

The Bath and Buxton warm waters are well known to be of much value in the present complaint. A course of warm bathing

at Buxton is one of the best means which can be resorted to for a cure of the stiffness and chronic pains left after an attack of acute rheumatism.

The tartar emetic ointment, rubbed near the seat of any fixed and severe rheumatic pain, will bring out a large crop of pustules, and sometimes afford essential relief.

Acupuncturation has lately been recommended in this disease, and may be tried in severe examples, where the preceding remedies fail. It consists in making a small puncture in or near the part of the body affected, with a long needle. The puncture produces little or no pain, and should be followed by no bleeding. A single puncture is sometimes found sufficient to remove the pain; and if it shoots to another part, that is punctured in the same way as the original seat of the irritation. Now and then, acupuncturation appears to have been followed by very striking advantages; but, in general, the improvement of the general health must be attended to at the same time.

The best remedies for chronic rheumatism originating in a syphilitic affection, or accompanying secondary symptoms, are a pint of compound decoction of sarsaparilla, taken in divided doses during the day, or the pills of the compound extract, with an alterative pill, as No. 99, page 120, every night, or every other night, a warm bath at ninety-five degrees, thrice a week, country air, and a mild nutritious diet.

The clothing should be warm, and the diet generous and stimulating, but moderate in quantity, so that the stomach may never be overloaded. As an article of clothing for the rheumatic, an under waistcoat of chamois leather is, generally, of very great service, and sometimes proves of the most striking advantage. If the lower extremities of the body are much affected, drawers also, made of the same material, should be worn. This leather washes like linen, only it must not be washed in hot water. For the first day or two, it usually feels cold and uncomfortable, but soon becomes more comfortable than flannel. It is proper to have several sets, and to change them frequently. The price is about sixteen shillings a set.

Before concluding this article, it is necessary to apprize the reader, that we frequently meet in practice with flying or fixed chronic pains, attended by stiffness, which imitate rheumatic pains, but are owing to a disordered state of the stomach and bowels; indeed, some of these cases may be correctly called rheumatic. In such instances, the symptoms of indigestion will generally present themselves more or less clearly marked, and the most effectual remedies will be those pointed out under that complaint, especially the alterative pill, No. 98, or 99, every night, with a little bitter infusion and carbonate of soda, as No.

83, page 116, through the day, the bowels being preserved regular by the aperient pills, No. 100, or 101, page 121. Another valuable plan in these particular instances is, to take half a pint of the compound decoction of sarsaparilla, twice a day, with two grains of blue pill, and five of extract of hemlock, made into two pills, every night. If the pains are severe, the patient may increase the quantity of hemlock here ordered, and take ten grains of it, once or twice a day, with two grains of the blue pill in the whole, daily. Whatever medicine be resorted to, the diet and regimen laid down under INDIGESTION must be attentively pursued; considerable exercise on foot or horseback being taken every day, if possible, with friction, early rising, &c.

Rheumatic Gout is a term frequently made use of in conversation; but it appears to me to have had its origin in ignorance, as I am not acquainted with any such complaint. Whatever difference of opinion there may be among discerning professional men on this subject, it is certain, that rheumatic gout is a malady whose symptoms cannot be clearly described, and that what is so called by the vulgar and uninformed is, generally speaking, acute or inflammatory rheumatism.

OF RICKETS.

This disease consists in a want of due firmness in the bones, in consequence of a deficiency in the phosphate of lime in their structure.

It often comes on slowly, the first appearances being a flaccidity of the flesh, emaciation of the body, and paleness of the complexion. The head, at the same time, appears large with respect to the body, and the sutures are preternaturally open. The head continues to increase in size; the forehead becomes unusually prominent; the neck is short; the teething is very slow, and much later than usual, and the teeth that do appear soon spoil, and are apt to fall out. The ribs lose their convexity; the breast bone protrudes; the spine is incurvated; the extremities of the bones of the limbs enlarge, while the other part of the bones appear more slender than natural, in their whole length they become soft and flexible, unable to support the weight of the body, and, at last, much distorted.

The child's strength also is diminished, he is averse to making exertion, and is unable to walk; the appetite is sometimes good, but often capricious and deficient; the motions are offensive, and of a bad colour; and the belly often much swelled and hard. In the beginning there is no fever, but in the advanced stage, a frequent pulse, with thirst, heat, and other symptoms of a hectic nature, attend.

It has been said above, that a deficient formation of bony earth constitutes the *immediate cause* of rickets; but the *remote* and *predisposing causes* are often involved in much obscurity. In general, however, they are, in my opinion, the same as those which give rise to scrofula, though there must exist in the child's constitution a disposition to this particular form of disease rather than to any other.

Parents of a weakly habit of body, whether natural, or acquired by an irregular and injurious mode of living, are most liable to have their offspring afflicted with this disease. A damp and cold residence, impure air, inattention to cleanliness, deficient exercise, innutritious food, and severe disorder of the digestive organs, will favor, in a powerful manner, the action of the exciting causes.

The disease seldom appears before the ninth month, and rarely shows itself after the second or third year. It seems to be almost solely confined to cold and variable climates.

TREATMENT. As this complaint is strictly one of general debility, the great object is to afford strength to the system by the use of strengthening medicines, combined with a nutritious diet, pure bracing air, daily exercise, friction, and the tepid bath.

The tonic medicines of most service here, are carbonate and sulphate of iron, sulphate of quinine, and alkaline solution, (page 2.) The preparations of iron, and the alkaline solution, may be taken as advised under INDIGESTION or SCROPHULA. Alkalies have been highly praised for their efficacy in this malady, and there cannot, perhaps, be a more suitable and efficacious form of administering them than the alkaline solution now recommended.

The sulphate of quinine may be given in doses of half a grain, or a grain, mixed with conserve of hips, or jelly, three times a day; the dose being proportioned to the patient's age.

But the state of the bowels will always require close attention at the same time. They should be regulated by a small quantity of rhubarb and sal polychrest, given every other night; or by the following pill, which is a valuable alterative and aperient.

> Take of good calomel, five grains; antimonial or James's powder, fourteen grains; compound extract of colocynth, and compound rhubarb pill, of each, half a drachm; simple syrup, a sufficient quantity to divide the whole into twenty pills. One to be taken every other night, or thrice a week, together with the tonic medicine in the day.

In addition to these medicines, the patient should have a nourishing diet, consisting of the most digestible animal food and vegetables, eggs, jellies, good malt liquor, and wine; but

the quantity of food allowed ought to be moderate, and no more than can be digested with ease. The air should be salubrious, dry, and bracing; and the exercise be considerable, and as active as the strength of the patient will permit. Friction, likewise, is of no mean service in this complaint. It should be carried alternately over the limbs, and every other part of the body, being resorted to for a quarter of an hour, three times a day, at least; and the hand may be defended with a little flour, or olive oil. The patient should lie on a hard mattress, and rise early in the morning.

There is commonly too great a degree of weakness to admit of the use of the cold bath, but the tepid bath at from ninety to ninety-five degrees, three or four times a week, may sometimes be a useful auxiliary to the foregoing measures.

Perseverance in the above plans will often be rewarded with great success; but little is to be accomplished here without the exercise of considerable patience and attention.

It is the practice of some persons to endeavour to give support to the limbs, and promote the restoration of their proper figure, by the use of bandages, and other mechanical instruments, but they are now very seldom employed by enlightened and judicious practitioners. They generally agree, that it is far best to leave to nature alone, assisted by good medical treatment, the duty of rectifying bones deformed by the rickets. It has been wisely said by an eminent physician, (Dr. Good,) that the best mechanical instruments are a hard incompressible couch, and a level floor, on which the infant may lie at full length, and stretch his limbs as he pleases. The couch should be made light and moveable, so that he may be carried upon it in the open air for exercise.*

When a rickety state of the constitution in young girls, gives rise to a crooked spine, and growing out of the shoulder, it must be treated in the manner described under *Spinal Curvature.*

OF RINGWORM OF THE SCALP.

Ringworm of the scalp, and scald-head, are generally considered by unprofessional persons to be synonymous terms, and they are so nearly alike as to make it unnecessary to draw a distinction between them in a popular treatise on medicine. There are several varieties of ringworm, or porrigo, as medical

* "In rickety affections of the knees, horse exercise is of great advantage; if the patient is very young, he may be allowed to ride the rocking horse as long as he likes. The position on horseback throws the knees outwards, while the exercise is beneficial to the general health of the patient." *Sir Astley Cooper, Lancet, vol.* ii. *p.* 464, 1823-24.

men call it; but as the treatment is very similar in all, we shall not now attempt to describe them separately.

The ringworm of the scalp is well known to make its appearance in separate patches, of an irregular circular shape, upon the scalp, forehead, and neck. It commences with clusters of small light yellow pustules, which soon break, and form thin scabs, which, if neglected, become thick and hard. If the scabs are removed, however, the surface underneath is left red and shining, but studded with slightly elevated points or pustules. When the disorder is neglected, the patches run together, and the whole head becomes affected. Where the disease is situated, the hair becomes lighter in its colour, it falls off, and its roots are destroyed. It generally occurs in children, and frequently proves exceedingly obstinate.

Sometimes it seems to originate spontaneously in children of a feeble and flabby habit, and who are ill fed, uncleanly, and not sufficiently exercised. But it is chiefly propagated by contagion, that is, by the actual conveyance of the matter from the diseased to the healthy, as may happen in the frequent contact of the heads of children, the use of the same towels, combs, caps, and hats.

Treatment. While the patches are inflamed and irritable, it is necessary to limit the local applications to washing the parts with warm water, or the infusion of poppy heads, and the anointing night and morning with the saturnine cerate, No. 94, page 118. When the irritability of the sores is in some degree allayed by these means, a stimulating and astringent ointment should be used, and the citrine, white precipitate, tar and sulphur mixed together, and zinc ointments, are the best. There are few applications equal to the citrine ointment, No. 89, which will often cure very bad cases of this disease. In the beginning, it must be mixed with an equal quantity of simple cerate, with which every affected part ought to be anointed night and morning; the strength of the ointment being gradually increased till it is used undiluted. The following composition has been much praised:

> Take of good calomel, two drachms; dried alum, acetate of lead, of each, one ounce; Venice turpentine, six drachms; spermaceti cerate, an ounce and a half.—Mix.

The hair is first to be cut off as close as may be, or the head shaved; the scalp is then to be slowly and carefully washed with soap and water, night and morning, and well dried afterwards. The ointment is to be applied after the washing every night, and is to be well rubbed all over the head. It may be washed off in the morning, and, when the scalp is made dry, instead of

applying it through the day, the head may be thoroughly powdered with the finest starch contained in a fine linen or cambric bag. The scabs and incrustations will hereby become dried, and often brittle, and in this state they should be gently picked or combed off one after another, as they grow loose and become detached at the edges.

One drachm of sulphuret of potash, dissolved in a pint of lime water, is an excellent lotion, and so is from six to ten grains of the nitrate of silver, dissolved in an ounce of distilled water. These lotions may be tried with the prospect of success even after the foregoing ointments have failed. It is only necessary to wash the diseased parts with them twice a day.

Warm white wine vinegar has been sometimes effectually used as a lotion, night and morning.

Whatever remedy is resorted to, the scalp must be shaved every eight or ten days, and where that is not practicable, the hair should be cut very close, and kept so; nothing but a light linen or oil skin cap being worn, which ought to be often changed.

In general, no local applications agree well if long continued, and it is often necessary to have recourse alternately to several of those just noticed.

The mode of treatment that I would recommend from experience in this disease, as decidedly the most effectual, is, after shaving the head, to wash every affected part with a saturated solution of sulphate of copper, every night for five or six nights, or longer, washing well with soap and water in the morning. At the end of the six days, the ringworm should be anointed every morning with a little of the best castor oil, and this must be continued till the cure is established. This is a most efficacious method of treatment, and in conjunction with constitutional management, will, I hope, be found almost infallible. Only the parts affected should be touched with the solution of copper, as it is rather caustic.

The cure may often be expedited, and rendered more certain and permanent than it otherwise might be, by attention to the patient's diet and exercise, according to the rules laid down under *Indigestion*, and by close attention to the improvement of the general health, in our endeavours to do which it is necessary to give aperient medicine frequently, and especially alterative medicine, as the pill, No. 98, or 99, every or every other night, and sarsaparilla in the day;—or quinine, cascarilla, or the chalybeate pills, No. 102, or 103, page 121.*

* "A useful book has lately been published by *Mr. Macilwain, on Porrigo, or Scald Head*, in which he states his conviction, that the constitutional treatment of this affection has been too generally neglected, and that it can seldom be cured without much attention to this point, as advised above.

Should the complaint be of long standing, and have become chronic, the irritation must be lessened gradually, by using the local applications in a weaker state, and by a steady use of the alterative pill, No. 98, or 99.

If, after having employed different remedies for a considerable time for the cure of ringworm, the disease seems nearly well, the head being, however, not quite clear, and the disorder now stationary, under the use of all the means tried, I would advise every application to be laid aside, (the head being kept very clean;) as, frequently, under such circumstances, the skin seems only to require a respite, and nature herself completes the cure.

OF RUPTURE.

By the term rupture is understood a tumour, formed by the protrusion of some portion of intestine out of the cavity of the belly, into a kind of sac, composed of that part of the membrane called peritoneum, which is pushed before the bowel.

The parts of the body where ruptures most frequently make their appearance, are the groin, the navel, and the upper and fore part of the thigh; they do also occur at every point of the anterior part of the abdomen; and less commonly at a few other particular points, which it is not necessary particularly to describe in this work. The small intestine is more frequently protruded than the large, especially the last portion of the small intestines. A part only of the diameter of the tube is sometimes included in a rupture; any larger quantity may descend, from a single fold to the whole moveable portion of the canal.

When the protruded bowels lie quietly in the sac, and admit of being readily put back into the abdomen, the case is termed a *reducible rupture*; and when they suffer no constriction, yet cannot be put back, owing to adhesions, or their large size in relation to the aperture through which they have to pass, the rupture is termed *irreducible*. A *strangulated rupture* signifies one, which not only cannot be reduced, but suffers constriction; so that, if a piece of intestine be protruded, the pressure to which it subjected stops the passage of its contents towards the anus, excites inflammation of the bowel, and brings on a train of alarming, and often fatal consequences.

The *general symptoms* of a rupture which is reducible, and free from strangulation, are, an indolent tumour at some point of the belly, most frequently descending out of the abdominal ring, or from just below what is called Poupart's ligament, that is, in or near the groin, or else out of the navel; but occasionally from various other situations. The swelling often origi-

nates suddenly, and is subject to a change of size, being smaller when the patient lies down on his back, and larger when he stands up, or holds his breath. It frequently diminishes when pressed, and grows large again when the pressure is removed. Its size and tension often increase after a meal, or when the patient is flatulent.

In consequence of the unnatural situation of the bowels, many patients with rupture are occasionally troubled with colic, costiveness, and vomiting. Sometimes, however, the functions of the viscera seem to suffer little or no interruption.

The *chief symptoms* of a *strangulated* rupture are, tumour in the groin, or scrotum, attended with pain, not only in the part, but all over the belly, and creating sickness and inclination to vomit, suppression of stools, and fever:—symptoms which grow quickly more and more severe, until the strangulation is overcome, or death ensues.

The *causes predisposing* to rupture are, a preternaturally large size of the openings at which the bowels are liable to protrude; a weakness and relaxation of the margins of these apertures; a preternatural laxity of the membrane covering and supporting the bowels, and which is called peritoneum, &c.

The chief *exciting cause* is the powerful action of the abdominal muscles and diaphragm on the bowels, and other viscera, which takes place under great bodily exertion, such as jumping, running, lifting, and carrying heavy weights, vomiting, straining at stool, playing on wind instruments, &c. In such exertion, the pressure which the contents of the abdomen must often encounter, sufficiently accounts for their protruding at any part, where the abdominal sides do not make adequate resistance.

Ruptures are more frequent on the right than on the left side of the body.

Treatment. I shall separately notice the leading parts of the treatment proper for *reducible*, *irreducible*, and *strangulated* rupture.

A person who has a *reducible* rupture should constantly wear a truss. Without this he is never safe; for, from the rupture being unsupported by this instrument, the quantity of intestine in the rupture is always liable to be increased, and when down, to be bound by a stricture. In this unsupported condition, it is also liable to be seriously injured by any accidental blow or fall, or an inflammation may occur in the parts from other causes, which may put the life of the patient in imminent danger. Therefore, no person should ever be careless respecting keeping a reducible rupture well supported by the use of a proper truss. It is a mistaken notion to suppose, that because

a rupture is small, it is of little or no consequence, since the smaller these tumours are, the greater in general is the danger, and, therefore, the more necessary it is that a truss should be worn. Some surgeons recommend the truss to be worn only during the day, but I think it should be worn constantly night and day, and this is also the opinion of Sir Astley Cooper. By wearing the truss constantly night and day, the ruptured patient, if young, is frequently cured in two, three, four, or more years, in consequence of the pressure gradually closing the opening in the belly through which the bowel descends; but by removing the instrument at night, the sides of the abdominal opening are relaxed, and liable to enlarge again, which protracts the period of cure, where a cure is practicable, and in all cases renders it less certain. Even adults are sometimes perfectly cured of this complaint by unremittingly wearing a truss. However, before applying a truss, the parts must be completely reduced, by the patient's lying down on his back, and gently pushing them up with the fingers. If at any time the rupture should descend, and a difficulty be found in reducing it again, the patient should lie down on his back for some time, and apply cold water to the parts, which will enable him to effect his purpose, unless strangulation or adhesion has taken place. The application of cold water will be particularly useful if any inflammation or great irritation is present.

Infants, and very young children, are not unfrequently troubled with the present complaint, and they should wear a truss as well as older persons. Infants of two or three months old may and ought to wear a truss with springs. In their case, the pressure should be extremely light, and when the infant is afflicted with the rupture soon after birth, it may, at first, wear a truss made in the form of the common spring-truss, without any spring. There is, however, one exception to these rules, that is, when in a male child afflicted with a rupture, the testicle is situated above the abdominal ring (or in the groin); in this case, a truss must not be worn until the testicle has descended into the scrotum or bag, its proper receptacle.

When children have a protrusion of some part of the intestines at the navel, instead of the groin, it is called by surgeons an *umbilical* rupture. The proper treatment in this kind of case is, to apply one half of an ivory ball, or a small pad, on the navel, fastening it down with strips of adhesive plaster, over which a belt must be put which encircles the whole trunk for some space, both above and below the navel. This belt must have straps attached to it, which are to come round the lower part of the belly and the thighs. A little waistcoat fastened by two strings may also be worn over the whole.

Trusses are of various kinds, but in general the common kind of truss is a very good one, and quite equal to the patient's wants. The goodness of a truss is known by its making effectual and equal pressure on the parts, without causing pain or inconvenience to the patient, and by not slipping out of its right situation, in the varying motions and positions of the body. That truss is objectionable which cannot be worn night and day. Very good trusses are made by Salmon and Ody, in the Strand; Pindin and Gawan, in Fleet Street; Mr. Coles, of Charing Cross, and other persons. Cases of rupture occasionally occur, which, after being reduced, cannot be kept up with any of the trusses commonly employed; under such circumstances, the patient must seek for a truss of a different description; and it appears that a person in London, of the name of Goldfinch, makes a truss of a peculiar construction, which often succeeds in keeping up ruptures that cannot be properly supported by other trusses. Mr. Coles, of Charing Cross, is also said to have a truss that is effectually worn in such particular instances.

Irreducible ruptures, as I have before said, are those in which the tumour cannot be made to disappear by putting the protruded parts back again into the abdomen. In these cases, a truss should rarely if ever be worn, as it would press upon the parts, and occasion pain, inflammation, and perhaps strangulation. The only thing that can be done, in the generality of these instances, is for the patient to wear a simple suspensory bandage, so as to afford a gentle support to the parts, and to prevent the increase of the tumour. If a reducible rupture has lately become irreducible, the patient may sometimes gain considerable advantage from lying in a recumbent position for a few days, and applying ice or very cold water to the parts frequently. These means, combined with rather a spare diet, will occasionally effect so great a reduction in the size of the tumour, in ruptures recently become irreducible, that it may be returned into the abdomen, and allow a truss to be worn as before. Persons afflicted with irreducible rupture should be particularly careful not to exert themselves beyond their strength, and to beware of pressure on the parts, bruises, &c. The bowels also should be preserved free from confinement.

The symptoms of *strangulated* rupture have been pointed out above. In this case the assistance of an able surgeon should be obtained as soon as possible. A little delay is here often fatal.* The principal means of reducing a strangulated rup-

* Sir Astley Cooper says, (*Lancet*, *vol.* i. 1823-4, p. 461.) he would not wait more than twelve hours without having the operation, if the tobacco enema, and the other means above advised, had been employed. He adds a case:—"Now let me allude to the

ture are, the application of ice, or a freezing mixture, bleeding from the arm, the *taxis*, and an injection of an infusion of tobacco. These may be tried nearly in the order in which they here stand. The *taxis* means a particular kind of gentle pressure on the tumour with the fingers, by which the surgeon endeavours to return the parts into the abdomen. The previous application of ice to the tumour, and of bleeding from the arm, often greatly facilitates the operator's object in making this attempt with the hand. If the above means fail, recourse should immediately be had to the operation. It is seldom safe to spend more than twelve hours in the employment of these means.

OF SAINT ANTHONY'S FIRE.

Erysipelas, or Saint Anthony's fire, is an inflammatory, cutaneous, and trivially elevated swelling, attended with a redness, which disappears, and leaves a white spot for a short time, after being touched with the end of the finger. It is, in fact, an inflammation of an unhealthy character, which is mostly superficial.

This eruption appears in the form of a red blotch or stain, which spreads with more or less rapidity; the part is generally of a bright red colour, clear and shining; the tumour being not accompanied by throbbing, but by a burning heat and tingling rather than acute pain. After the redness has continued for an uncertain time, blisters of various sizes sometimes rise on the skin, generally containing a thin, sometimes limpid, sometimes yellowish fluid. The red colour changes to a yellow as the eruption goes off, and the parts which were not occupied by the blister often suffer a desquamation, or peeling off of the skin. In mild cases, the eruption often gradually disappears, or is carried off by a spontaneous sweating in a day or two. In others, it continues without beginning to decline for twelve or fourteen days, or longer.

When this disease attacks the face and head, it is most dangerous, because of the inflammation being apt to spread to the brain. It has there the same appearance as on other parts of the body. A red spot appears on some part of the face, generally of no great extent, which spreads till it sometimes covers,

case of a late illustrious nobleman (Francis, Duke of Bedford,) who died of this disease; he was in the country, and during his stay there had strangulated rupture. He was attended by a person of strong mind, and who had studied his profession with industry; he offered to perform the operation, but it was delayed, on the ground that London skill and advice should be obtained; but before this could be had the nobleman died. I do not mean to undervalue London skill, but it is certainly great folly to delay in this complaint."

not only the whole face, but the scalp also, now and then descending a considerable way down the neck. The face, and frequently the whole head, swell, the fever is considerable, and the tumid eyelids sometimes suppurate.

The prognosis is particularly influenced by the seat of the inflammation; in the limbs it is safer than in the trunk, in the trunk than in the face, and all other things being equal, the more extensive the inflammation the greater the danger.

Whatever part the erysipelas attacks, it is generally preceded by chilliness, succeeded by heat, anxiety, quick pulse, thirst and other febrile symptoms. It is likewise frequently attended with what are called bilious symptoms, as a bitter taste in the mouth, foul tongue, pain in the stomach, head-ache, giddiness, nausea, and even vomiting and purging, frequently of bile.

The *chief causes* are, violent passions, such as anger, acute grief, &c.; exposure to the heat of the sun, or that of the fire; cold combined with damp, especially in variable weather; too full a diet, particularly the abuse of fermented liquors; the action of various vegetable, mineral, and animal poisons. Wounds, contusions, and fractures are frequent causes. Whatever renders the body irritable predisposes to erysipelas; and it is far most frequent in spring and autumn.

In most cases, it would seem to be intimately dependent on the state of the constitution. Thus persons in the habit of drunkenness, and other kinds of intemperance, and who, in a state of intoxication, meet with local injuries, often have an inflammation of an erysipelatous character; while other subjects, who lead more regular lives, experience, when they meet with similar injuries, healthy inflammation. It is an ancient opinion, that this disease commonly originates in disorder of the liver, and other digestive organs: Hippocrates and Galen entertained this opinion; and the celebrated foreign physician, Tissot, with others of great eminence, have written at length in favor of this view of the subject. I believe it to be the sentiment of the best informed physicians of the present day.*

Its characteristic appearances are, a florid skin, with vesicles, or small bladders, containing an amber coloured secretion under the raised skin.

Treatment. Almost all cases of erysipelas are so connected with a deranged state of the stomach and bowels, as to make a free evacuation from the intestinal canal, by the exhibition of mercurial and saline purgatives, of primary importance, with

* "The occurrence of erysipelas shows something very wrong about a man's health." —"It is always the result of a disordered state of the digestive organs. I never see it come on if the digestive organs be right, and it goes away as soon as they are put right."—*Abernethy's Surgical Lectures.*

which an emetic may be conjoined. In slight cases of the disease, the emetic, No. 29, page 103, should be given immediately; and after it has operated, a purgative powder, composed of a grain of calomel and ten grains of rhubarb, which may be washed down by the draught, No. 27, or 28. This purgative may afterwards be repeated every morning, or every second morning, according to the state of the bowels, and the disease; and the saline mixture, No. 81, page 115, should be given every four hours during the day. A cooling vegetable diet is likewise necessary, for the first day or two, and afterwards mild nourishing food should be taken, with a little animal food once a day.

When, however, the disease is very severe in its inflammatory symptoms, the pulse being hard and quick, with great heat of the general surface, and extensive inflammation in the part affected, blood-letting will, for the most part, be necessary, if the constitution of the patient is good or strong, and he is not far advanced in years. Bleeding is more especially necessary, if the erysipelas severely attacks the head, and the patient is of a vigorous habit. Under these circumstances, about fourteen ounces of blood may be taken from the arm, and the operation may be repeated to the second or third time, should the symptoms of fever and inflammation still continue acute, notwithstanding the first evacuation. It is never proper to repeat the blood-letting, in any case of erysipelas, so frequently as is done in other inflammatory diseases; and it should be particularly remarked, that these directions refer only to the case of patients living in the country, and enjoying an open pure air. When this disease attacks persons inhabiting a large and populous city, blood-letting must be used with great caution, even when there is an appearance of considerable strength in the constitution. In no case is the application of leeches or cupping advisable. In very acute cases of erysipelas, the frequent administration of active purgatives, as No. 120, page 125, or No. 73, or 74, page 114, are particularly indicated. The powder, No. 120, may, therefore, be given at night, and a dose of the mixture, No. 74, on the following morning, and they may be repeated every day, or according to the severity of the symptoms; the fever mixture, No. 81, being taken at the same time, three or four times during the day. An occasional draught of soda water is also proper, if the thirst be urgent. Should the patient be affected with great and heavy sleep, what medical men call *coma*, the feet must be frequently bathed with warm water, and a mustard poultice applied to them afterwards.

The diet in these cases should be mild and diluting, consisting, for the first few days, solely of vegetable food, with

frequent draughts of weak lemonade, barley-water, or toast-water.

But severe erysipelas is most frequently met with in delicate and irritable constitutions, or in persons debilitated by age, intemperance, poor living, or other causes, and then we find universally, that a strengthening mode of treatment is far the best, and sometimes absolutely necessary to the preservation of life. In such examples, especially if the patient inhabit a crowded and populous city, or the inflammation change to a purple or livid hue, our chief dependence must be upon a liberal use of bark, wine, and muriatic acid, as advised under *Mortification*. In the first place, the powder, No. 120, page 125, should be given in order to empty the bowels, and restore the secretions, and then the sulphate of quinine, in doses of three grains every four hours, with three or four ounces of good Sherry or Madeira wine. The sulphate of quinine is superior to any other preparation of bark, and is sometimes a remedy of great value in the present complaint. If this medicine be not at hand, a drachm of the powder of Peruvian bark may be given every second or third hour, in conjunction with eight drops of muriatic acid, three drops of laudanum, and an ounce and a half of water. The diet also must be generous. A little of the most digestible animal food may be allowed once or twice a day, with fresh eggs, sago, panada, &c.; and if the patient has lived intemperately, and indulged much in fermented or spirituous liquors, it will generally be necessary to allow him a little of his favorite drink; under such circumstances, even gin has been allowed with advantage. In illustration of the correctness of this remark, I would here quote the observations of Sir Astley Cooper on a case in point: "A man," says this distinguished and very able surgeon, "who had weakened his constitution by the excessive use of ardent spirits, and who belonged to the lower orders of London, had erysipelas dreadfully severe; his head was swollen to an enormous size, and his recovery, by every person, thought impossible. It was discovered one day, that his wife brought him some gin. He declared that he was better from having drank it, was consequently permitted its continuance, and to the astonishment of all, rapidly got well."—*Lectures on Surgery, by Sir A. Cooper, No.* XV.

As a local application, it is very common to make use of flour, starch, and similar powdery substances, but the best plan in the early stage of the complaint is, to wash the inflamed parts three or four times a day with lukewarm water, or with a lotion made by mixing together an ounce of the solution of acetate of ammonia and six ounces of tepid water. When the blisters break, and the fluid they contain oozes out, the attendants cannot do

better than wash the parts, from time to time, with a decoction of elder-flowers and poppy-heads. Some persons speak favorably of an ointment composed of equal parts of calamine cerate, soap cerate, and the ointment of acetate of lead. It has been found very useful in St. George's Hospital in erysipelas from a wound in the head.

Blisters applied over the inflamed surface, will often promptly arrest the progress of the inflammation. It is a favorite remedy with many practitioners in America and France. It is said to be most useful when there is but a moderate degree of feverish re-action, with a moist and slightly red tongue, and a somewhat hot and tense skin.

When this complaint arises from a wound or bruise, a warm bread and water poultice should be applied over the part, and be frequently renewed, the general treatment being such as is recommended above.

Before this article is closed, the erysipelas of infants must be noticed, on account of its dangerous nature. It attacks children soon after birth, begins about the navel, and often spreads over the whole belly. The inflamed skin is hard and very painful to the touch; and it appears to seize the most robust as well as delicate children. Sometimes it is seated on the fingers and hands, or the feet and ankles, when it is always less dangerous than when it seizes on the belly or any other part of the trunk of the body. This species of erysipelas is most apt to terminate in gangrene. The belly often becomes uniformly tense, and mortified spots make their appearance.

In the treatment of the infantile erysipelas, the bark has been found of all medicines the most useful. The best form of giving it to infants and children, as I have frequently observed in the course of this work, is the sulphate of quinine. A quarter of a grain may be made into a small pill with a little aromatic confection, and given every two or three hours. The little patient should likewise be nourished from a breast of good milk; and linen compresses, wrung out of camphorated spirit of wine, be applied over the inflamed parts.

OF SAINT VITUS'S DANCE.

This disease attacks boys and girls indiscriminately; and those chiefly who are of a weak constitution, or whose natural good health and vigour have been impaired by confinement, or by the use of scanty or improper nourishment. It appears most commonly from the eighth to the fourteenth year. Its approaches are often slow. A variable and frequently a ravenous appetite, loss of usual vivacity and playfulness, a swelling and

hardness of the lower belly, and, in general, a constipated state of the bowels, aggravated as the disease advances, and slight, irregular, involuntary motions of different muscles, particularly those of the face, which are thought to be the effect of irritation, precede the more violent convulsive motions, which now attract the attention of the patient's friends.

These convulsive motions vary. The muscles of the limbs and of the face, those moving the lower jaw, the head and the trunk of the body, are, at different times, and in different instances, affected by it. In this state the patient does not walk steadily; his gait resembles a jumping or starting, he sometimes cannot walk at all, and seems palsied; he cannot perform the common and necessary motions with the affected arms. This convulsive motion is more or less violent; and is constant except during sleep, when, in most instances, it ceases altogether. Articulation is frequently impeded, and swallowing is also occasionally performed with difficulty. In very bad cases, the eye loses its lustre and intelligence, the complexion is pale, and the countenance expressive of vacancy and languor.

General weakness and irritability of the nervous system during childhood; sudden fright; and the suppression of eruptions on the skin, have proved *causes* of this disease: but there is no cause so frequent as debility and irritation in the stomach and bowels.

Treatment. There are no medicines so generally and decidedly useful in this malady as purgatives, which may be repeated every other day, and in many cases every morning, with the promise of great advantage every way, and without danger of inducing debility. Either of the purgatives, No. 27, or 28, page 103, or No. 74, page 114, may be employed in the morning, or the pill, No. 98, page 119, at night; and this plan should be persevered in for many weeks. For a knowledge of the superior value of purgatives in this disease, we are principally indebted to Dr. Hamilton, Senior, of Edinburgh. The late Dr. Parr, of Exeter, says, that he pursued the purgative plan with great activity through sixty cases of the disease which occurred to him in the course of twenty years' practice, and was successful in the whole of these cases except one. After it has been adopted for two or three weeks, it will be advisable to administer at the same time, some vegetable or metallic tonic during the day, of which class of medicines the leaves of the orange tree, Peruvian bark, flowers of zinc, ammoniate of copper, and nitrate of silver, appear the most efficacious here. Three grains of oxyde of zinc, and two of assafœtida, form a very good tonic pill in this complaint, one or two of which may be given thrice a day. Or these medicines may be given in the

manner advised under EPILEPSY. I think the pill No. 104 given twice a day, and the pill No. 99 every night, a good plan, provided the bowels are regularly acted upon by small doses of *Beaume de Vie* taken every second or third morning.

Arsenic has been recommended by some respectable practitioners as having been perfectly successful in several cases, and when we remember how effectually and speedily it allays the irritation of the stomach and bowels which gives rise to ague, and thus cures that complaint, we cannot be surprised at its good effects in St. Vitus's dance, a disease which, in the majority of instances, certainly has its origin in irritation and debility of the stomach, and remaining portion of the alimentary canal. The arsenical solution, as ordered by the London College of Physicians, may be given in doses of from three to five drops to a youth of twelve or fourteen years of age, three times a day; the dose being cautiously increased if necessary.

Should there be reason to suppose, that the disease is caused by worms, the oil of turpentine will be a suitable and often a valuable remedy. It should be given in large doses, as from half an ounce to an ounce, even to a child of ten years old, which may be repeated twice or thrice in the course of a week. The most agreeable way of taking it, is to rub this quantity in a mortar with half an ounce of mucilage of gum arabic, a part of the yolk of an egg, and an ounce or two of water; or it may be taken simply suspended in a little water.

In some instances, electricity has been very useful. A Dr. Alderson has said, that the tincture of meadow-saffron has also been effectual. It certainly has a great effect on the nervous system, and it is not improbable, that it might be useful in certain examples. The dose is ten or twenty drops twice a day.

OF SCARLET FEVER.

This disease is divided by medical writers into two varieties, that is, scarlet fever without sore throat, called also simple scarlet fever; and scarlet fever with sore throat. But it is not necessary to treat of each of these distinctly, for they differ only in the severity of their symptoms. Scarlet fever without sore throat is usually a mild disease, which terminates favourably within a short period; but when attended with an affection of the throat, it is generally more or less severe and dangerous, the intensity of its symptoms and its danger being, for the most part, proportioned to the degree in which the throat is affected. Indeed, when the ulcerations in this part are deep, foul, and corroding, it does not differ in its nature or treatment from putrid

sore throat, to which disease I refer the reader, for the proper treatment to be pursued in such cases.

The disease is ushered in by the usual *incipient symptoms* of common inflammatory fever, such as chilliness succeeded by heat, quick pulse, languor, thirst, &c. about the second day from which, in the simple variety, numerous specks or minute patches of a vivid red colour appear about the face and neck; and within twenty-four hours, a like efflorescence is diffused over the surface of the body, and occasionally even tinges the inside of the lips, cheeks, palate, and fauces. Sometimes the scarlet eruption is continuous and universal; but more generally on the trunk of the body, there are intervals of a natural hue between the patches, with papulous dots scattered over them. There is an increase of the fever in the evening, at which time the rash is most florid. On the fifth day, the eruption begins to decline; the interstices widen, and the florid hue fades; on the sixth, it is very indistinct, and is wholly gone on the seventh. The pulse, while the rash is coming out, is commonly very quick and feeble; the tongue is covered with a whitish fur in the middle, its sides being of a dark red; the face is considerably swelled; and there is great anxiety and restlessness, with a sense of tingling or itching in the skin, and sometimes at night a slight delirium. Though the fever is in most cases moderate, it now and then runs high, but in the simple variety of the disease is rarely alarming. In many cases, indeed, the eruption appears and passes through its course with little inconvenience of any kind from fever, itching and restlessness.

In scarlet fever attended with sore throat, all the symptoms are more violent; the fever is more severe, accompanied with nausea, vomiting of bile, great heat, and languor; considerable anxiety, head-ache, and delirium. The pulse is feeble; the breathing quick; the throat is inflamed and becomes excoriated, throws off a large quantity of minute superficial whitish sloughs, which intermix with the increased flow of mucus, and augment the difficulty of swallowing. The sloughs generally separate about the fifth, sixth, or seventh day.

This is the ordinary course; but, in many cases, the symptoms run still higher; and the disease, so far at least as regards the proper treatment, is identified with putrid sore throat.

Children are by far the most frequent subjects of both these varieties, and communicate it readily to each other. When unaccompanied by sore throat, it is only slightly contagious; when sore throat is present, it is highly so. They are both occasionally epidemic, and in this form occur most usually at the close of the summer.

A specific contagion is the *grand cause;* though particular

states of the atmosphere, and of the body, dispose to the reception of this contagion, as is proved by persons frequently escaping when exposed to its operation under aggravated circumstances, and afterwards becoming affected by it from comparatively slight sources. But in what this particular state of the atmosphere and body consists, we are almost totally ignorant.

TREATMENT. For the proper treatment of the severest cases of scarlet fever, in which the throat is deeply affected with spreading foul ulcerations, I refer the reader to PUTRID SORE THROAT, as it is only the less aggravated cases which we shall treat of here.

It should be observed, that scarlet fever is at all times a disease of debility, which prostrates both the body and mind.

All that will in general be requisite in the treatment of simple scarlet fever, that is, without any affection of the throat, is to keep the patient in a moderate and equable temperature, (about sixty degrees of Fahrenheit's thermometer;) to preserve the apartments clean, open, and well ventilated; to enforce a light spare diet, without animal food; to direct cooling acidulated liquors, as lemonade and tamarind tea, for common drink; and to administer gentle aperients, as No. 27, page 103, every other day, more particularly toward the decline of the eruption. The emetic, No. 29, page 103, ought likewise to be given at the commencement.

In treating the second variety, or scarlet fever with an affection of the throat, the advice of Dr. Willan, and Dr. Withering, cannot be too strongly recommended to the reader's confidence and attention. The former able physician remarks, "The best mode of practice here is to administer gentle emetics repeatedly during the first stage, according to the plan recommended by Dr. Withering, in a judicious treatise on this disease." The emetic, No. 29, page 103, should, therefore, be given directly, and repeated every morning for the first four or five days, and when the symptoms of fever and inflammation run high in the beginning, it will often be of the greatest service to repeat this medicine twice a day, during the first and second day. Vomiting not only tends to take off the dry burning heat of the skin, by relaxing it, but unloads the throat and fauces of the fluids that gorge and distend them. Both the above distinguished physicians had great experience in the treatment of this malady, and trusted almost entirely to full, free, and repeated emetics, to conduct it to a favorable termination, in those cases in which the symptoms were not highly malignant. Dr. Willan says, when an emetic wholly fails in its operation, the patient seldom recovers.

Mild aperients are likewise necessary, and a combination of

calomel and rhubarb is generally the most useful. A grain of calomel, and eight grains of powdered rhubarb, may be given to a child of ten years old, every other morning.

At the commencement of the disease, cold affusion or ablution is strongly advised by the most eminent physicians. It must not be resorted to except where the heat of the skin is great, and without perspiration, and then it is often of the greatest service in moderating the subsequent symptoms. The patient may be stripped naked, and cold water be dashed over him every evening for the first three or four days; or the whole body may be quickly sponged with cold water. The refreshment is often instantaneous, and operates like a charm.*—See what is said of this valuable remedy under TYPHOUS FEVER.

Antiseptic gargles should be frequently employed, and the room be often and freely fumigated with the nitrous acid vapour, as advised under PUTRID SORE THROAT, or be sprinkled with the chloride of lime, as recommended at page 199. The gargles noticed in that article are proper here; or a very useful gargle may be made by mixing a drachm of muriatic acid with seven ounces of barley-water, and an ounce of honey of roses. When the state of the throat is bad, these applications should be made strong, and be frequently used. In boarding schools, and large families, the nitrous acid fumigation, or the use of the chloride of lime, is of great moment.

Towards the decline of the disease, it will generally be advisable to administer mild strengthening medicines, of which a decoction of bark with the muriatic acid is the most appropriate and effectual. Two ounces of this decoction, with five or six drops of the acid, and a drop or two of laudanum, may be given to a child of twelve years old, three or four times a day. Or instead of this, the carbonate of ammonia may be administered.

* Bateman's remarks on this point are worthy of record here, and more especially since he was a physician of careful observation, considerable discernment, and superior integrity. It would be delightful to see physicians generally copying his example. See *Memoirs of Dr. Bateman*. He says in regard to the employment of cold water in this disease "We are possessed of no physical agent as far as my experience has taught me, (not excepting the use of blood-letting in acute inflammation,) by which the functions of the animal economy are controlled with so much certainty, safety, and promptitude, as by the application of cold water to the skin, under the augmented heat of scarlatina, and of some other fevers. This expedient combines in itself all the medicinal properties which are indicated in this state of disease, and which we should scarcely *à priori* expect it to possess; for it is not only the most effectual *febrifuge*, (the *febrifugum magnum*, as a reverend author, Dr. Hancock, long ago called it,) but it is in fact, the only *sudorific* or *anodyne* which will not disappoint the expectation of the practitioner, under these circumstances. I have had the satisfaction, in numerous instances, of witnessing the immediate improvement of the symptoms, and the rapid change in the countenance of the patient, produced by washing the skin. Invariably, in the course of a few minutes, the pulse has been diminished in frequency, the thirst abated, the tongue has become moist, a general free perspiration has broken forth, the skin has become soft and cool, and the eyes have brightened; and these indications of relief have been speedily followed by a calm and refreshing sleep."

Dr. Peart has written very strongly in favor of the efficacy of this medicine in severe scarlet fever, and, as it is a grateful tonic and stimulant, it appears likely to be highly beneficial in many cases. Two drachms of the carbonate of ammonia may be dissolved in five ounces of water, (and six drachms of syrup of orange-peel, added,) of which two tea-spoonfuls are to be taken every two, three, or four hours, in a little water, according to the urgency of the symptoms. See page 19.

In the beginning, the diet should be spare and mild, because the inflammatory symptoms then run high; but afterwards those of debility prevail, when the food should be nutritious, but moderate in quantity, consisting of jellies, preparations of arrow-root, sago, Embden grits, and a little wine. If the symptoms are malignant towards the decline of the disease, the throat being deeply affected with spreading foul ulcerations, the bark, wine, and acids, must be given in large quantities; indeed, the treatment then, as I have before said, does not differ from that laid down under PUTRID SORE THROAT, to which article I refer the reader.

Scarlet fever has a great tendency to weaken the absorbent system, and incapacitate it for carrying off the fluids that are exhaled into the internal cavities of the body, and hence to produce dropsy. This consequence is, however, in general very easily removed by giving five or ten drops of the tincture of foxglove, according to the age of the patient, three times a day, in a little wine and water, or infusion of bark.

PREVENTION. It has long been known that Dr. Hahnemann, of Leipsic, has asserted nightshade to be a preventive of scarlet fever; but, since the year 1818, several practitioners in the north of Europe have repeated his experiments, and they find them founded in truth. The first of these, Dr. Brendt, of Castrin, affirms, that all who employed this remedy escaped the infection; and his account is corroborated by Dr. Muhsbeck, of Dearmin, in Western Pomerania, who says he has used it for seven years, and with equal success; he administered it to all those who dwelt in the houses where the disease prevailed, continuing its use until a falling off of the outer skin had taken place in those attacked. Dr. Dustenbourg, of Warbourg, has also published an account of a series of experiments, confirming these statements; and several subsequent memoirs have appeared all equally corroborative of this virtue in the nightshade. The formula generally recommended is, a solution of two grains of the extract of nightshade in an ounce of any distilled water; and to children from one to ten years of age, from one to five drops of this solution is given four times a day; from ten years of age and upwards, from six to ten drops is given, also four

times in the twenty-four hours. It will not be necessary to continue it longer than two or three weeks.

It will be highly advisable also to sprinkle the rooms of the house where this fever prevails, with either the chloride of lime or of soda, which have a striking effect in destroying the infection of this disease. See page 199.

OF SCIATICA.

Sciatica is a technical term for chronic rheumatism fixed in the hip joint, in which situation it frequently proves particularly obstinate. It is of the nature of *neuralgia*, or painful affection of nerve. Its symptoms and causes are, for the most part, the same as those detailed under CHRONIC RHEUMATISM; and in respect to the treatment, little can be added to what is there said. In treating it, I should place the greatest dependance upon the use of the compound ipecacuanha powder,—or the ammoniated tincture of guaiacum,—or turpentine and sulphur combined, (as advised under CHRONIC RHEUMATISM) in the day, with a pill composed of a grain of calomel, four grains of James's powder, and a grain or two of opium, at night; the tepid bath at ninety-five degrees being taken every other morning or night, or the vapour bath once or twice a week. The air-pump vapour bath is in general the most efficacious mode of applying vapour, and the power of galvanism or electricity is often very considerable; it should never be neglected in bad cases. The diet and regimen advised under INDIGESTION must be strictly adhered to. In some instances, it will be very advisable to rub the tartar emetic ointment on the external surface of the joint, so as to bring out a large crop of pustules, which should be kept discharging for a month or two.—See CHRONIC RHEUMATISM.

OF SCROPHULA, OR KING'S EVIL.

Scrophula (from *scrofa*, a sow,) is so called because swine are said to be subject to it. It is also called *King's Evil*, from Edward the Confessor, and other succeeding kings, both of England and France, pretending to cure it by the touch.

It is a disease, one of the chief, or most palpable symptoms of which is a chronic swelling of the glands, in various parts of the body, which glands generally tend very slowly to imperfect suppuration. The first appearances, however, sometimes consist of spots on different parts of the body, and of eruptions and ulcerations behind the ears; but the glands seldom or never fail to become affected in the course of the complaint.

The disease, for the most part, shews itself early in life, though rarely before the second, and commonly not till the third year of infancy; from which period it continues to prey on the system till the seventh, tenth, fifteenth year, or longer, when, in ordinary cases, it gradually subsides. The attack is sometimes postponed till after the twelfth or fifteenth year. The first tumours are usually upon the sides of the neck, below the ears, or under the chin; they are, in general, two, three, or four in number, but often still more numerous, and are moveable, soft, and slightly elastic, of a globular or oval figure, without pain or discolouration of the skin. In this state they continue for some time, when they grow larger, become more fixed, and acquire a purplish redness. They then give a feeling of greater softness, and should they ulcerate, the skin, in one or more of them, becomes paler, and a peculiar thin liquid is poured forth at several small apertures, which soon becomes of a curd-like form. The tumour or tumours then subside, but frequently others rise in their neighbourhood, and in this manner the disease proceeds, the same process being continued for several years; after which the ulcers heal with puckered and indelible indentations, provided the complaint terminates favourably; but if not, other parts of the body become tainted with the morbid influence, especially the eye-lids, cheek, groin, joints, and limbs.

In the worst and severest stage of the disease, the entire system appears to be contaminated; hectic fever ensues, and sometimes tubercular consumption, which gradually puts an end to the contest.

In infants and young children, the belly often swells and becomes hard, proving that the mesenteric glands are affected.

It has been said above, that there is little or no pain in scrophulous tumours, which is generally true, but sometimes the pain is severe, especially when the disease arrives at its worst stage.

The scrophulous ulcer has a pallid and indolent appearance, the surface being covered with a transparent shining fluid, giving it a glassy look. The discharge is generally a whitish curdled matter; the surrounding skin of a deep brown or lour; the edges are thick, retorted, and insensible. es, however, the edges are inverted, and exquisitely

mmonly affects children of soft and flaccid flesh; blue eyes; smooth skins, and rosy cheeks; and e frequently a tumid upper lip, with a chap in It is not, however, exclusively confined to

such habits, for it is not unfrequently met with in individuals of a dark complexion, with dark eyes and hair.

The *remote* and *exciting causes* are almost invariably such as debilitate, and which reduce the tone of the living fibre. And hence we find the common debilitating powers of cold, damp, deficiency of active exercise in an open salubrious air, excessive use of mercurial medicines, meagre or unwholesome food, and the close atmosphere of populous towns, to be the most usual incidental sources of scrophula. It is very frequent in large manufacturing towns, and often follows other diseases which enervate the constitution, such as measles, small-pox, and hooping cough. A variable climate is the most favourable for its appearance, it being much less common in regions uniformly cold or hot.*

TREATMENT. The general idea of scrophula is, that it is a disease of debility; and, therefore, the great object is, to invigorate the habit by every possible means. The most celebrated and efficacious remedies here are strengthening and alterative medicines, as Brandish's alkaline solution, preparations of iron, coltsfoot juice, the compound calomel pill, burnt sponge, extract of hemlock, and oxygen gas; warm and cold bathing; together with a nourishing diet of animal food, and constant exercise in a dry, warm atmosphere.

Mr. Brandish, a surgeon at Alcester, has spoken very highly of the *alkaline solution*, frequently mentioned with approbation in this work, (see page 2). He used it for above thirty years, and says, that he found it of invaluable service in this disease, and had perfectly and permanently cured many cases with it, and often after many other esteemed remedies had failed. I know, from personal experience, that it is a valuable tonic, and consider it worthy of much confidence and attention. It is likewise recommended by other professional men; and the fact that all alkaline medicines have always been in high estimation for their efficacy in scrophulous disorders, is calculated to increase our confidence in this alkali. The patient should commence with a tea-spoonful twice or thrice a day, and gradually

* "Among the *causes* which appear to give rise to scrophula in children, are the practices of rearing them by the hand, and suckling them too long—two extremes, both of which often lead to the same result, the imperfect nourishment of the child."—"A similar injurious effect will be produced by allowing the same wet-nurse to suckle several children in succession, which we have known to be pursued as far as three, when debility and symptomatic amaurosis forced the woman to resign her charge. Imperfect nourishment of the child, and consequent tendency to scrophula, is also likely to be induced in those cases where the wet-nurse menstruates regularly during lactation. It is an opinion professed by Wiseman, and other writers of great ability and experience, that a scrophulous *wet-nurse* may occasion the disease to appear in the child to whom she gives the breast." *Cyclopædia of Practical Medicine, vol* iii. *p.* 715. To the correctness of these opinions I entirely subscribe.

increase it to two tea-spoonfuls. It should be taken in a tea-cupful of mild beer, milk and water, or linseed tea. At the same time, three or four grains of Plummer's pill, or of the blue pill, may be taken every other night, and the local tumours frequently washed with a strong solution of common salt and water, or vinegar and water. A poultice of sea tang, bruised, is likewise a very valuable application to scrophulous tumours. Together with the use of these means, the patient, when it is practicable, should make use of a tepid bath of about eighty-five or ninety degrees, three or four times a week. Cold sea-bathing is much resorted to, but many very able professional men prefer the tepid bath as just recommended, among whom is Sir Astley Cooper. Where, however, there is a good deal of remaining strength, the cold bath may be useful, if the patient feels a glow after coming out; but as a general resource, I think the tepid bath, especially of salt water, is decidedly to be preferred. Regular friction with the hand, or flesh brush, should likewise be resorted to, and I would recommend it to be employed constantly night and morning, for ten or fifteen minutes, over the weakest parts, and, in change, over every part of the frame. When the swellings will bear it, the friction may be carried over their surface. Some respectable surgeons have made very favourable reports of the use of this means in indolent scrophulous tumours.

If the above alkali does not suit the case, the carbonate and sulphate of iron are sometimes of much service. They are chiefly applicable to those cases which are accompanied with a pallid and blanched complexion, and considerable debility. The forms, No. 102, or 103, page 121, are proper.

Dr. Cullen, of Edinburgh, was partial to the use of the juice of coltsfoot, and it is certainly worthy of confidence, particularly when a cough is present, with feverishness towards night. From two to four table-spoonfuls of the expressed juice of this herb may be taken, twice or thrice a day.

The compound calomel pill, or the pill, No. 99, page 120, has already been noticed. When the belly is enlarged, or there is evident obstruction internally, it ought always to accompany the other remedies employed; but in no case should it be given in such doses as will be likely to affect the mouth and occasion salivation. The only correct use of calomel in this complaint is in small doses, united with some antimonial preparation, and employed with a view to its alterative effects.

Sir Astley Cooper has recommended the oxymuriate of quicksilver, combined with bark. He says that, in every case, much benefit may be derived from this medicine. He advises

it to be given in small doses, when, says he, it has not the specific effect of mercury, but acts merely as a tonic.

Take of solution of oxymuriate of quicksilver, made according to the London Pharmacopœia, one ounce; compound tincture of bark, two ounces.—Mix, and take a tea-spoonful and a half, three times a day, in water, and after three weeks increase it to two tea-spoonfuls. It is best taken directly after a meal, as after breakfast, tea, or supper.

Sir Astley Cooper further says, respecting the treatment of this disease:—

"Air, exercise, and nourishment, are the three great points to be kept in view in the treatment of scrophulous affections. The state of the atmosphere to be chosen, is that in which the air is dry and warm; a bleak wind is not advisable. It is a mistake to suppose that the air of the coast in the wet and cold season is of any advantage to scrophulous children; it is only in warm and dry weather that any benefit will be obtained. In cold weather the sea coast is not desirable. Children with scrophulous affections, or even those predisposed to them, should take a great deal of exercise in the open air."—"I will now mention what are the best medicines; once a week, or every ten days, two grains of calomel and eight of rhubarb, should be given, in order to restore the secretions. A good medicine to be given daily, for a short time, is the rhubarb and steel—two grains of rhubarb, and from three to five of the carbonate of iron. This is a very good tonic. Another good tonic consists of two grains of rhubarb, and from four to six grains of dried subcarbonate of soda, with ten grains of columba, which may be taken mixed with sugar twice or thrice a day."—"It is right to recommend sea-bathing; the bath should be taken about three times a week, at eleven in the morning. The temperature of the bath should be at ninety-four degrees; the patient should remain from sixteen to twenty minutes in it, and walk afterwards."—*Lectures on Surgery, by Sir Astley Cooper, No.* 66.

Burnt sponge has considerable effect in reducing the size of scrophulous glands, but the alkaline solution, or some other tonic, should be given at the same time, since the sponge has a debilitating influence on the general habit when continued for a long period. One or two drachms may be taken thrice a day.

In irritable and painful scrophulous ulcerations, the extract of hemlock, in doses of five or ten grains, thrice a day, is often very useful. Dr. Fothergill thought highly of it in such instances, and, in my opinion, it is entitled to all the confidence he placed in it. It relieves pain, allays irritability, and disposes the ulcer to heal. Dr. Baillie states, in his posthumous writings, that in scrophulous swellings of the glands of the neck, he had experienced good effects from sarsaparilla and soda, with some preparation of steel—but more powerful effects from sea-air and sea-bathing—and most of all from the air and waters of Malvern.

Scrophula is remarkable for the presence of great debility with little or no irritability in the general habit, and when this is the case, the inhalation of oxygen gas may be of great utility. It has been strongly recommended in this disease, and from being a powerful tonic and stimulant, will, no doubt, be found serviceable in many instances. Sometimes there is so great a degree of torpor or inirritability in the constitution, that the most valuable tonic medicines have little or no effect; in which case, I should expect much advantage from the use of this gas, as it has often had a very sensible effect in giving tone to the system after almost all other means had failed.

Iodine has lately attracted much of the attention of medical men, and some seem to expect great advantage from its employment in scrophulous complaints. Dr. Coindet, a respectable physician at Geneva, was the first to call the attention of professional men to this substance, and he speaks in the highest terms of its efficacy in reducing the size of such tumours; but it is very active in its operation, and ought not to be used except under the direction of a medical man well acquainted with its nature and effects. I am persuaded that, under careful and judicious management, it is a remedy of great value in certain cases of scrophulous swellings and indurations. I do not mean that it will cure the disease, but that it will be found of much use as an auxiliary. The best way of taking it is in small doses, combined with a vegetable bitter; for example, ten drops of the solution of hydriodate of potash may be taken twice a day, in two ounces of compound infusion of gentian, or in double the quantity of compound decoction of sarsaparilla. I think it should rarely be carried beyond this quantity, for when administered to any great extent, it invariably enfeebles the constitution, and produces fainting, trembling, and other unpleasant effects. The ointment of hydriodate of potash may be used as directed under CANCER. Its power in alleviating the pain in scrophulous swellings and induration, is greater than any thing I am acquainted with.

The best ointments for dressing the ulcers with, are the red precipitate, nitrate of mercury, (No. 89, page 117,) and zinc. Either of these may be used, and when one begins to lose its effect, a second may be tried. The carbonate of iron sprinkled on the surface of the ulcer is likewise a good application. The late Dr. Beddoes, of Bristol, recommended the following plan of treating scrophulous ulcerations, which he learnt from an old farmer in Ireland, who had practised it for many years with remarkable success. A sufficient quantity of the leaves and stalks of wood sorrel is prepared by wrapping them in a cabbage leaf, and macerating them by their own juices in warm peat

ashes. This pulp is applied as a poultice to the ulcer, and left twenty-four hours; it is then to be renewed in the same way to the fourth time, the poultice, at each dressing, being left on for twenty-four hours. After the removal of the fourth poultice, a sufficient quantity of the roots of the meadow-sweet is to be bruised, and mixed with the sour head that appears on butter-milk, left in the churn, which is to be applied as a poultice, in the same manner, till the sore heals. Dr. Beddoes remarks, that he was told the healing always took place speedily, and often in two or three weeks; and the whole statement is corroborated by an extract of a letter from Mr. Edgeworth. The leaves of the wood-sorrel are the most efficient articles in this treatment.

In every instance, the diet should be very nutritious, consisting of the most digestible animal food, eggs, good beer, wine, and the usual articles of a wholesome and nourishing diet. No pork or salt meat should be taken. Constant exercise in an open dry atmosphere is of the last importance. I will venture to assert, that no medicine will succeed here, without much daily exercise in a salubrious air. The influence which deficient exercise has in producing scrophula, is proved to a demonstration by the fact, that for one boy afflicted with this complaint we meet with at least four girls. Now boys will have exercise, they cannot be kept within doors, but girls are too often deprived of it, and thus mothers and governesses make them scrophulous, rickety, and hump-backed, that they might excel in music, drawing, or other accomplishments. It is an indisputable fact, that five cases out of six of curved spine and growing out of the shoulder, occurring in young girls, are entirely owing to a deficiency of exercise in the open air; and we find there is no cure for this spinal curvature, in the majority of instances, but in a skilful use of exercise. Friction is a species of exercise, and is worthy of much confidence in the management of scrophula.

OF SCURVY.

Scurvy is a disease of great debility, in which there are livid spots on the skin, from blood which has escaped out of its proper vessels; languor, and loss of muscular strength; and pains in the limbs. The cutaneous eruptions, so commonly called scurvy by unprofessional persons, is of a very different nature, being simply some foulness of the skin depending upon internal disorder, the treatment of which has been described at page 396.

This disease is frequently divided into the land and sea scurvy; but as they differ very little in their symptoms, and

not at all in their treatment, I think it unnecessary to make the distinction.

Its first appearances are a pale, bloated countenance, lassitude, disinclination to motion, and diminished strength. If the gums be examined, they will be found spongy and apt to bleed on being touched, while the teeth are loosened in their sockets. The skin is sometimes rough, but more generally smooth, and shining, covered with bluish or livid spots, which do not rise above it; and these spots often coalesce in large blotches, particularly in the legs and thighs. About the same period, old ulcers often break out again, and the slightest mercurial preparation quickly produces salivation. The ulcers discharge often a thin fetid fluid, and the edges are livid, with irregular granulations, which sometimes run into a bloody fungus. The stools are often frequent and offensive, but there is sometimes an obstinate costiveness; the urine is commonly high coloured and stinking; the pulse feeble; and the joints very weak. A shrinking of the flexor muscles soon takes place, and renders the limbs useless; the calves of the legs fall away, with sometimes an irregular hardness; and even those bones which have been formerly broken and re-united, become again separate at the line of re-union.

In the worst state, blood is frequently discharged from the bowels, bladder, and other organs; the slightest motion brings on faintness, and sometimes immediate death; and catchings of the breath are frequent and dangerous.

A diet of salt provisions, with a deficiency of vegetables; want of cleanliness; cold united with moisture; and neglect of exercise, are the *most common causes*. In certain habits, it may be excited from poor living; and a neglect of cleanliness, and exercise, when salted provisions has made no part of the patient's diet.

The *immediate cause* is an impoverished and putrescent state of the blood, and a diminution of the vital power.

It may be readily *distinguished* from malignant fever by the absence of heat, quick pulse, and the other symptoms denoting severe fever; by the intellectual faculties being little or not at all impaired; and by its coming on more gradually, and continuing a much longer time, than putrid fever.

Treatment. The object is to restore to the body its wonted energy and strength, which is here most effectually accomplished by observing great cleanliness and free ventilation, and resorting to a dry air, with the use of fresh provisions of a nutritious quality, fermented liquors, as ale, cider, and spruce beer, vegetable acids, acid fruits, and such vegetables as scurvy-grass, water-cress, brook-lime, and garlic. If these are employed in

time, the disease will be found to yield easily; but when the prostration of strength is great, the patient must be positively forbid the least bodily exertion, as it is very apt to induce faintness, and even death. In cases of extreme weakness, the external air alone, and especially when sharp or in a current, is sufficient from its pressure and stimulus to destroy the small degree of vitality remaining; a fact long ago observed, and recently confirmed by five men dying in the boat belonging to the Prince of Wales ship of war, between the Downs and Deal Hospital.

Lemon juice is of the greatest service in this disease. It should be mixed with water and sugar, and drunk freely. Where it cannot be got, the juice of limes, oranges, or the shaddock, may be substituted, and used in the same way.

Captain Cook thought very highly of malt sweet-wort, or infusion of malt; and Dr. Silvester's antiscorbutic drink is also valuable. It is made by boiling three ounces of cream of tartar, four ounces of juniper berries, two drachms of ginger, in powder, and five pounds of coarse sugar, in six gallons of water. After boiling half an hour, the whole is poured into a tub, and allowed to ferment. It may be drunk, in the quantity of from one to three pints daily, as soon as the fermentation commences. Sowens, an article of diet well known in Scotland, was also considered by Captain Cook of great efficacy.

Costiveness must be prevented by dissolving a little cream of tartar in a decoction of tamarinds and prunes, a little of which may be taken occasionally, so as to keep the bowels free from confinement without their being purged. It is of much moment that the bowels should not in any degree be purged.

Ulceration of the gums require the daily use of an astringent gargle, as No. 56, or 57, page 110. For the relief of acute pain, there is, perhaps, nothing so suitable and efficient as the compound powder of ipecacuanha, which may be taken in doses of three or four grains, three times a day, made into a pill with conserve of roses. Contractions of the muscles of the legs should be treated with warm fomentations of vinegar and water, and gentle friction.

Scorbutic ulcers on the legs are best treated by sprinkling on them a little carbonate of iron, once or twice a day, or touching them with tincture of myrrh; a carrot poultice, or one of bread and water, into which a table-spoonful of yeast has been stirred, being applied occasionally at night. These ulcers are most benefited by stimulating applications.

OF SHAKING PALSY.

The shaking palsy is a permanent agitation of the head or limbs without any exertion of the will, the body being generally bent forward, often with a propensity to run or fall headlong. It commonly appears after mature age.

The approach of this malady is so imperceptible, that the precise period of its commencement is seldom recollected by the patient. A slight sense of weakness, with a proneness to tumbling, sometimes in the head, but more commonly in the hands or arms, are the first symptoms noticed. These affections gradually increase, the patient bends himself forward, and, by degrees, the legs suffer similar agitations, and there is a loss of power with the hands and arms. As the disease advances, the limbs become less and less capable of executing the dictates of the will, while the sufferer seldom experiences even a few minutes suspension of the tremulous agitation; and should it be stopped in one limb by a sudden change of posture, it soon makes its appearance in another.

In the more advanced stage, the tremulous motions of the limbs occur during sleep, and augment in violence till they awaken the patient in much agitation and alarm: the power of conveying the food to the mouth is impeded; the bowels are exceedingly torpid; the trunk of the body is permanently bowed; muscular power diminished; mastication and swallowing difficult; and the saliva constantly dribbles from the mouth. The disease, however, often continues a long time before it arrives at this extreme state.

Long exposure to damp vapour, by lying from night to night on the bare earth, has produced it, as well as other *causes* of chronic rheumatism; and it has frequently followed chronic rheumatism itself; and long indulgence in spirituous liquors. Indeed, any thing that greatly debilitates the nervous power may prove a cause, as the daily exhalation of metallic and other injurious vapours, &c. But sometimes the *remote cause* is involved in obscurity.

The part of the nervous system more immediately affected seems to be the spinal marrow, and, perhaps, a peculiar affection of this sensitive and important subject is, in the majority of instances, the immediate cause of the shaking palsy.

It is to be *distinguished* from St. Vitus's Dance, by its attacking those in mature and advanced life, and by the peculiar symptoms above described. Saint Vitus's Dance almost invariably attacks the young.

TREATMENT. Those remedies which have the power of

promoting a healthy state and action of the spinal marrow are the most useful. Large blisters frequently applied down the spine, seams and issues cut near it, and stimulating embrocations, as No. 18. page 146. freely rubbed over it, promise benefit. The burning of moxa (see page 59) on the same part may prove of great service in many instances; and the skilful use of galvanism is worthy of much regard.

Some respectable physicians have recommended an active purgative plan as very efficacious. It may be pursued in the way advised under St. Vitus's Dance. The arsenical solution has likewise been well spoken of. See page 4.

Where the disease is suspected to be of rheumatic origin, the means noticed under chronic rheumatism are proper, especially the use of the compound decoction or extract of sarsaparilla, with the compound ipecacuanha powder, and an alterative pill of calomel, James's powder, and opium, or No. 99, page 129. The dandelion may in some cases be very useful. Bathing in the Buxton and Bath springs, is very advisable.

The nux vomica appears to possess a specific influence over the spinal marrow, and in those cases which resist the employment of the preceding remedies, I would strongly advise it to be tried. It may be taken as directed at page 81; and see what is said of cupping along the spine under Tetanus.

OF SHINGLES.

Shingles is an eruption of vesicles in small distinct clusters, with a red margin, which spread round the body like a girdle; in short, it is a variety of ringworm, or tetter, occupying the trunk of the body.

Frequently it occasions little inconvenience beyond what arises from the heat and itching; but sometimes it is preceded and accompanied with a slight constitutional affection, as sickness, head-ache, thirst, and feverishness. The first symptoms of the local disease are those of heat, itching, and tingling, in some part of the trunk, which, when examined, is found to be studded with small red patches of an irregular shape, upon each of which, numerous minute elevations are seen clustering together. In the course of twenty-four hours these vesicles enlarge to the size of small pearls, are perfectly transparent, and filled with a limpid fluid. During three or four days other clusters arise in succession, and with considerable regularity, that is, nearly in a line with the first, extending always towards the spine at one extremity, and towards the breast bone at the other; most commonly passing round the waist like half a sash, but sometimes, like a sword belt, across the shoulder. The ve-

sicles terminate in thin dark scabs, which fall off about the twelfth or fourteenth day.

It is most frequent in summer and autumn, when slight causes will often excite it, and especially exposure to cold after violent exercise, and the use of cold vegetables. It is sometimes connected with considerable disorder of the digestive organs.

TREATMENT. The complaint is generally of little importance, and rarely requires any thing beyond the exhibition of a mild purge, No. 28, page 103, every other day, and a little of the ointment, No. 94, page 118, spread on linen, applied to the eruption; the diet being simple, and small in quantity. If the feverish symptoms are considerable, the mixture, No. 81, page 115, may likewise be taken during the day, and the diet should be wholly fluid, consisting of gruel and arrow root.

Now and then it happens, on the decline of the eruption, that the patient is affected with an intense deep-seated pain in the chest, and if the pulse should then be frequent and hard, it will generally be very proper to let blood to the extent of ten or twelve ounces. But whether blood-letting be resorted to or not, it will be necessary to give the patient the following pills, and to direct the observance of a mild diet, with a little opening medicine occasionally; which will, perhaps, be the best plan for relieving the pain.

Take of calomel, twelve grains; James's powder, fifteen grains; opium, in powder, four grains.—Mix, and, with a little conserve of hips, divide the mass into twelve pills. One to be taken twice or thrice a day.

OF SMALL-POX.

Small-pox is divided by medical writers into two species; the *distinct* or *benign*, and the *confluent* or *malignant*. In the former, the pustules are perfectly distinct and separate from each other; in the latter, they coalesce, and the eruption is continuous.

The nature of this disease is best known, and consequently its species may be determined, from observing the state of the face, the danger being better estimated by the number and appearance of the pustules there than on any other part of the body. If they be distinct, and few in number on the face, even although in some degree confluent elsewhere, the disease is termed the distinct small-pox, and the danger is inconsiderable. If, on the other hand, there be a load of pustules on the face, if they run into each other so that it appears uniformly of a whitish colour, as if, to use Sydenham's expression, it were covered with parchment, whatever appearance the eruption may

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have on other parts of the body, the disease is termed confluent, and the danger is considerable.

Of the benign or distinct kind. This form is usually ushered in by a fever of the inflammatory type, characterized by considerable pains in the back and loins, nausea, vomiting, pain in the pit of the stomach on pressure, and disposition to drowsiness, the skin and throat are parched, the bowels costive, the urine at first pale, afterwards more scanty and high-coloured, and in infants there is sometimes one or more epileptic fits.

Towards the end of the third day from its commencement, the eruption makes its appearance, first on the face and hairy scalp, then on the neck, and at length over the whole body. The patient is often affected by sneezing as soon as the pustules show themselves, which continues to recur while they are coming out. About the fifth or sixth day, counting from the commencement of the fever, that is, the second or third of the eruption, a little vesicle, which appears depressed in the middle, is seen on the top of each pustule, containing a matter nearly colourless. The eruptive fever now disappears. For two or three days the vesicles increase in breadth, the matter gradually assuming the purulent appearance. About the eighth day of the disease they become spherical, and the pustules are completely formed; being then very itchy, hard, and prominent, and almost terminated by a point. At this time, when the pustules are pretty numerous, the face swells, and is often affected with acute pain; the swelling sometimes extends to the whole head; the eye-lids seem as if distended with a fluid, and are often so much enlarged as entirely to close the eyes. When the eyes are much affected from the beginning, the sight is sometimes lost, generally in consequence of one or more pustules forming on the cornea.

About the eleventh or twelfth day from the commencement of the fever, the pustules have gained their full size, which differs a little in different epidemics, but is generally about that of a pea; a dark spot appears on each, and from being soft and smooth, they become rough, and throw out a yellow matter. They now begin to shrink, and the matter drying forms a small crust. Sometimes only part is thrown out, which, together with what remains, hardens, and in a few days falls off, leaving the skin in the places which it covered of a dark brown colour, that often continues for a long time after the patient is well; and in cases where the pustules have been large, or late in becoming dry, deep indentations of the skin remain. At this time, the swelling of the face and other parts gradually subsides.

On the coming out of the pustules, the fever suffers a remis-

sion, and in the mildest cases, disappears entirely about the fifth day, at which time the eruption is completed; but when the pustules are numerous, a return of fever usually happens about the eleventh day. This is called the secondary fever, and is much to be dreaded in the severe form of the disease; but in the distinct small-pox, it is for the most part slight, and disappears in a few days.

The later the eruption is in appearing, and the sooner the pustules become dry and fall off, the better in general is the prognosis.

Of the confluent or malignant form. The sensation of cold, anxiety, pains in the back and loins, nausea, vomiting, pain in the pit of the stomach on pressure, &c. are present in this as well as in the mild form of the disease, but are here experienced in a greater degree. In the distinct small-pox, the eruptive fever is inflammatory, and never shows a tendency to typhus, while in the confluent, although at the beginning inflammatory, it generally soon shows this tendency. In the most alarming cases, indeed, the fever is a typhus almost from the first. The tendency to sweat is uncommon in this form; but a looseness often precedes the eruption, and continues for a day or two after its appearance. In adults, a salivation often attends instead of a looseness.

The eruption is irregular in its appearance, and in the succession of its stages. It is commonly preceded by a red efflorescence on the face, which has in some measure the appearance of erysipelas, and soon spreads over the neck and breast, from which the pustules emerge on the *second* day, in the form of small red points; many of which soon run together, and form clusters. Matter is formed sooner in the confluent than in the distinct small-pox; but the pustules do not retain their circular form, are of an irregular shape, often flattened, and appear like thin pellicles fixed upon the skin, containing, instead of true pus, a brownish watery fluid; nor are they surrounded with an inflamed margin, the spaces between the pustules being pale and flaccid. The swelling of the face appears earlier, and rises to a much greater height than in the distinct form of the disease; indeed, the pustules are often so numerous on this part, and so run into each other, that almost the whole face seems one large pustule or vesicle, the surface being perfectly smooth. The fever often abates on the appearance of the eruption, but never wholly ceases; about the ninth day it suffers a remarkable increase, which is the commencement of the secondary fever, and which often appears with more alarming symptoms than any that preceded it:—if the disease is of a malignant character, severe head-ache, and obstinate watchfulness arise, the hoarse-

ness, inflammation of the throat, and difficulty of breathing increase, and, in many cases, all the worst symptoms of typhus supervene, when the patient is carried off about the eleventh day from the commencement of the disease.

Small-pox appearing in a regular and mild form is seldom fatal, if properly managed; but it often induces an irritable and debilitated state of some important organs, as the lungs, bowels, or eyes, and thus leaves behind a disposition to cough, inflammatory affection of the chest, or bowels, and an inflamed condition of the eyes. Sometimes the whole system is so enervated by it, as easily to fall a prey to scrophula in its worst forms.

Confluent small-pox must always be considered a dangerous disease. The chief symptoms indicating danger are, great prostration of strength, the pustules becoming flattened, or brown and black, great anxiety, oppression at the chest, delirium, and the appearance of small purple spots in the skin. If the stools are unusually fetid, the prognostic is bad.

The eleventh day is the most fatal in small-pox.

The disease is well known to be the effect of a specific contagion.*

The marks of *distinction* between this disease and measles, and between it and chicken-pox, may be readily seen by referring to what has been said of those complaints, at page 290 and 541.

TREATMENT. Small-pox is an eruptive fever, which, in the commencement, is most always attended with marks of high excitement in the system, and the principal objects of attention in every case are, to moderate the fever, and to obviate any unfavorable symptom that may arise in the course of the disease. The most appropriate and effectual means of keeping under the fever are, cool air and mild purgatives, combined with a spare diet.

The treatment of distinct small-pox is in general sufficiently simple. The bowels should be opened directly by giving the powder, No. 120, page 125, which will mostly operate two or three times, and every day afterwards the bowels must be kept in a soluble state, by the occasional use of the mixture, No. 74, page 114, and the higher the fever rises the more freely must it be employed. When the fever runs high, no fear of subsequent debility should deter us from administering purgative medicine freely, since, so far from producing this effect, it is the most certain means of preventing it, under such circumstances, by moderating the excessive action present; which, if allowed to go on unchecked, would undoubtedly induce great

* For the means of arresting the progress of this contagion in any particular situation, see page 199, and the note at page 542.

prostration of strength, and, perhaps, a putrid state of the humours. I do not mean to recommend very *active purging*, but the regular administration of the *milder kinds* of purgatives. Calomel is one of the best purgatives in small-pox, and I think very favorably of giving a grain in a pill, with three grains of James's powder, at night, and a mild aperient draught, as No. 28, in the morning. The patient must, at the same time, be exposed to fresh and cold air, and at no period should he be confined to the house, whatever be the season, unless the fever be such as confines him to bed. He should lie with few bed clothes, and on a mattress; his room should be cool; and a free use of cold drink, and frequent changes of cold linen, are highly proper and useful. The *cooling regimen* has great effect in moderating the eruptive fever.

So long as the fever continues considerable, the diet should be mild and rather spare, consisting chiefly of decoctions of barley, grits, and such like, with bread. Toast and water, lemonade, or cream of tartar and water, may be taken for common drink.

These means are usually sufficient to conduct the benign disease to a favorable issue; but if any unusual and severe symptoms arise in the progress of the disease, they will require to be combated by the usual measures. For example, if great irritability and restlessness occur, a mild opiate should be given in conjunction with some febrifuge medicine, the purgatives, cold air, and cooling diet, as above advised, being still continued. The patient may take eight or ten drops of laudanum in the saline draught, No. 24, page 102, every night, or every six or eight hours, if the restlessness be considerable; or he may take the following pill, which tends at once to allay excessive irritability, and to moderate fever.

Take of opium, in powder, two or three grains; calomel, three grains; James's or antimonial powder, six or eight grains; conserve of hips, a sufficient quantity to divide the whole into six pills. One to be taken every night, or every eight hours.

When obstinate vomiting occurs, it must be restrained by exhibiting the effervescing draught, No. 24, or the pill of camphor and opium advised under VOMITING. Should a looseness come on early and be moderate, it must never be interfered with; it is only when it proves excessive and debilitating that it should be checked, by the employment of mild astringents, as a powder composed of two or three grains of compound powder of ipecacuanha, and ten grains of tormentil powder, which may be repeated after every liquid stool, or by the other mild measures recommended under DIARRHŒA.

Blood-letting is rarely advisable in small-pox, even when the

fever is very considerable, since the excitement is much better reduced by the use of purgatives and a cold regimen. If, however, the inflammation of the eyes, or the heaviness and stupor, what medical men call *coma*, are considerable, six leeches may be advantageously applied to the temples, and a blister put behind the ears.

In the confluent or malignant small-pox, the same plan of treatment, by the exhibition of purgatives and a cooling regimen, is necessary in the beginning, as above recommended for the milder variety; and the higher the symptoms of general excitement rise at the commencement, the more assiduous must we be in the use of mild purgatives, and in enforcing the employment of cold air and drink. Here, after the first few days, symptoms of debility generally appear, and on their appearance a supporting system must be entered upon directly, the patient still being kept cool, and every source of irritation avoided. When signs of debility appear, the fever, for the most part, changes from inflammatory to typhus, and the means detailed under the latter articles are the most proper. But of all the tonics employed in malignant small pox, there appears none so well adapted to the support of the system as the mineral acids, especially for the first few days of debility. For there is then a great deal of heat and feverishness still continuing, although accompanied with symptoms of debility, and these acids prove powerfully tonic at the same time that they are cooling. Either the diluted sulphuric or muriatic acid may be administered, but in general, perhaps, the muriatic acid is the best, and may be taken as prescribed under TYPHUS.* Camphor is also a valuable medicine in this state of the disease. If the symptoms of debility increase, and especially if the pulse sinks, the pustules flatten, and the surface of the body turns pallid, wine must be added to the other remedies, blisters and mustard poultices applied to the feet, and the other means advised under typhus should be resorted to.

OF SPITTING OF BLOOD.

Hæmoptysis, or spitting of blood, is a discharge of blood from the lungs, or windpipe, and its terminations, called bronchia.

It is generally preceded by a sense of weight, anxiety, and pains about the breast, with some degree of difficulty of breathing, often a sense of heat, sometimes under the breast-bone, and

* "The sulphuric acid is the only remedy, in conjunction with wine, on which we can rely in the confluent small-pox, when the pustules are filled with a bloody sanies, and the urine is coloured by broken-down particles of blood."—*Dr. Anthony Thomson's Elements of Materia Medica, vol. 1. page 704.*

sometimes moving from place to place; and a little before the blood appears, there is frequently a saltish taste in the mouth. At length a tickling at the top of the windpipe occasions hawking, which brings up a little blood of a florid colour, and more or less frothy. Frequently there is a cough attended by much irritation of the larynx, and sometimes by very acute pain in the chest. As the quantity of blood increases, there is a rattling noise in the windpipe before it is brought up, and then it comes less by hawking than by coughing, which is sometimes the case from the first.

These *local symptoms* are often preceded by general chilliness, with weariness of the limbs, pains of the back and head, costiveness, frequent, full pulse, and other symptoms of fever. The pulse has usually a particular kind of vibration, which may continue for many days after the hæmoptysis has ceased.

The slighter cases of *hæmoptysis* depend on a simple extravasation of blood from the mucous membrane of the *bronchia*. Those cases, however, of violent and extreme hæmorrhage, which sometimes resist all medical treatment, arise from a very different and more dangerous cause.* In these, some part of the substance of the lungs has undergone great changes, being indurated to a very great degree. The ordinary extent of this induration, is from one to four cubic inches; it is almost always very exactly circumscribed, being as considerable at the very point of termination as in the centre. In this induration, the diseased part appears quite homogeneous, being altogether black, or of a very deep brown, and disclosing nothing of the natural texture of the part, except, perhaps, the bronchial tubes, and the larger blood vessels.

In advanced cases of pulmonary consumption we sometimes meet with considerable losses of blood from the lungs, which may result from the rupture of a vessel traversing an excavation formed by the ulceration and discharge of a tubercle.

This disease is often of an alarming character, from its indicating a tendency to ulceration of the lungs, especially when it occurs in persons with a narrow chest, and of a consumptive appearance. If it be followed by cough, pain, or difficulty of breathing, the danger is considerable.

* Ten pounds of blood has been known to be lost in forty-eight hours, by a young man, who died under the hæmorrhage. In cases of a less acute character, thirty pounds have been lost in fifteen days. Hæmorrhage so severe as this, almost always indicates the existence of induration in the lungs. In witnessing the immense losses of blood which sometimes take place from the human body, some physicians have been led to the belief, that the blood in such cases experiences a sudden dilatation. This appears to me probable. We know that in mountains sufficiently elevated to occasion a considerable diminution of the atmospheric pressure, most persons spit blood, and that in severe hæmorrhages the blood is more liquid and less coagulable than natural.

Those of a sanguine habit, slender make, and delicate constitution, are most subject to it, and it occurs most frequently at from fifteen to thirty-five years of age, and in spring or autumn. Fulness of blood disposes to it, and so does great sensibility and irritability, combined with a narrow conformation of the chest.

The *occasional causes* of this affection are, external heat,—a considerable and sudden diminution of the weight of the atmosphere,—whatever increases the force of the circulation,—violent exercise or straining,—the external application of cold.

The spitting of blood which is met with in consumptive patients, and accompanies the formation of tubercles, is most frequently of the bronchial species,—the blood proceeds from the windpipe or its terminations; while that which occurs in subjects affected with disease of the heart, is commonly owing to an induration in the substance of the lungs.

When blood is discharged from the stomach, it is called vomiting of blood, and is usually in much more considerable quantity, than when it takes place from the lungs,—of a darker colour,—more grumous,—often mixed with other contents of the stomach, and commonly unattended with cough. In the present disease, it is brought up by hawking or coughing, is of a florid red colour, and mixed with a little frothy mucus.

Treatment. A discharge of blood from the lungs may appear either in the sanguine, and florid, or in the debilitated, and pale. In the former case, it is accompanied with increased vascular action, and the blood is florid and tenacious; in the latter it is attended with general laxity or debility, weak vascular action, and the blood is thin, and of a diluted red. Of course, the treatment must vary, in some degree, in these opposite states of the constitution.

In spitting of blood occurring in persons of a sanguine temperament, whose strength is little, or not at all impaired, the best remedies are, ipecacuanha and Glauber's salt united; digitalis; nitre; superacetate of lead; blood-letting; and a mild spare diet of vegetable food.

Ipecacuanha wine and Glauber's salt, combined in such small doses as operate mildly on the bowels, and produce slight nausea, is a draught which proves of the utmost service in this complaint, and is applicable to almost every case. It has frequently succeeded after many other powerful remedies had failed. Should the nausea excited by the following draught be insufficient, or the bowels be too much acted upon, the dose of ipecacuanha may be increased, or that of the salts lessened, accordingly, and vice versa, since the proper manner of using this form is, to combine the medicine in such proportions as will act mildly, yet sufficiently, in the way just now described.

Take of ipecacuanha wine, one or two drachms; Glauber's salt, one drachm; infusion of angustura or cascarilla bark, ten drachms.—Mix for a draught; to be taken, in the beginning, every second hour, and after it has checked the bleeding, twice or thrice a day, so as to keep up a gentle action on the bowels.

Digitalis, or foxglove, is also a medicine of considerable value here, and it may either be given alone, in doses of ten drops of the tincture, every second or third hour in the commencement, and afterwards twice or thrice a day; or be combined in smaller doses, with the above draught. When spitting of blood threatens to terminate in consumption, in young persons of a florid complexion, it is sometimes highly valuable.

Nitre has been strongly recommended, and is often of great value, more especially in full habits. The Italian physicians have unlimited confidence in it, and employ it in large doses, as a drachm dissolved in cold water, repeated three or four times a day. It may be given in this way, or in doses of half a drachm, repeated every hour or two, till the urgency of the symptoms subsides, and then at longer intervals. It should not be continued longer than two or three days at a time.

If the foregoing means fail of success, which they rarely will, the superacetate of lead should be tried. It is a most powerful astringent, and may be given as advised at page 82.

Should the bleeding occur in a full habit, where the strength is considerable, and the pulse full and hard, bleeding from the arm to the extent of twelve or twenty ounces, may often be practised with advantage. It is particularly indicated when the pulse still continues hard, in sanguine habits, after the flow of blood from the lungs. But it must never be resorted to when the constitution of the patient is delicate and weakly; and, in my opinion, should be cautiously employed in spitting of blood occurring in persons who have a constitutional tendency to consumption, although they may appear of a florid complexion, and full of flesh at the time of the hæmorrhage; for, in such subjects, there is generally a great deal of such irritability as is much and injuriously affected by debilitating measures. In these examples, it is far better, in general, to trust to the draught of ipecacuanha and Glauber's salt, to foxglove, or superacetate of lead, than to blood-letting. Great injury is often done by bleeding delicate patients in this disorder. In by far the greater number of cases, I am convinced that blood-letting is decidedly improper.*

* When the habit of the patient is full and robust, and the hæmorrhage great, a full bleeding is indicated, and it should be noted that one blood-letting of twenty or twenty-four ounces on the first day, will have more effect in checking the hæmorrhage than several pounds drawn in the course of a fortnight.

It is a singular fact, that in a person threatened with hæmorrhage, either from the

Fainting is often serviceable in checking bleeding from the lungs, and it is, therefore, improper to use means to prevent it, where the bleeding is considerable. On this account, cordials, strong odours, and every other means of rousing the patient, should be avoided, in every case of active hæmoptysis, occurring in full habits. When the complaint occurs in a debilitated or delicate habit, and is the consequence of weakness, the course of proceeding should clearly be different, and every proper means of preventing fainting must be employed.

At the same time that the above remedies are resorted to, the temperature of the patient's room should be kept as low as possible, by the usual means, as cold externally applied is sometimes of great service. In extreme cases, cloths wet with the coldest water may be freely applied to the chest, between the shoulders and to the genitals.

But in spitting of blood occurring in debilitated subjects, those means must be resorted to which have the power of stopping the bleeding without further weakening the constitution, and, therefore, blood-letting must be avoided. Here we may with much confidence trust to the exhibition of common salt, or the draught of ipecacuanha and Glauber's salt. If the flow of blood be considerable, and it is particularly desirous to check it speedily, the pills of superacetate of lead (page 82,) claim particular confidence, and should be given every second or third hour in the commencement, until the bleeding is restrained, and afterwards the draught of ipecacuanha and Glauber's salt may be administered twice or thrice a day, with tonics, to make the advantage gained by the lead permanent. In the hæmoptysis of weakly habits, the oil of turpentine is also often very serviceable, and so are the vegetable and metallic tonics. Thirty drops of the oil of turpentine may be given every second hour, till the bleeding stops, and afterwards the tonics.

lungs, brain, or elsewhere, the application of leeches, and other methods of drawing blood, frequently decide the very occurrence of the disease it was intended to prevent. M. Laennec, a late French physician of great experience, says (*Treat. on Diseases of the Chest*, p. 197,) "It occasionally happens that both local and general bleeding, in place of proving derivative, seem, on the contrary, to excite hæmorrhage. I have noticed the return of the menses, and aggravation of the monthly discharge, during the application of leeches, to the pit of the stomach. General bleedings appear sometimes to have a like effect on hæmoptysis." Dr. James Clark also says "I have more than once seen slight hæmoptysis follow the application of leeches round the anus, (and have warned patients not to be alarmed at it,) when applied to obviate pulmonary hæmorrhage. In one case, a severe attack of hæmoptysis took place a few hours after the application of leeches." The inference I draw from this fact is, that debility being commonly one of the chief causes of hæmorrhage, we might reasonably expect that since the artificial abstraction of blood tends still more to augment the weakness, it would in many instances really increase the evil it was ignorantly designed to remove. I think this fact affords great support to my opinion, that unless the strength of the patient is considerable, and the hæmorrhage great, we are not justified in the artificial abstraction of blood. In other cases, invigorating measures will be of more immediate and manifest service.

In all cases of hæmoptysis, in which the strength of the patient is exhausted, the use of strengthening medicines is necessary, and sometimes highly useful; and either bark, bitter infusions, as No. 63, 65, or 85, page 116, or diluted sulphuric acid, should be taken without delay. The pills of sulphate of quinine, No. 115, page 126, are very proper; or thirty drops of diluted sulphuric acid may be given in a wine-glassful of infusion of gentian, thrice a day. In these instances, a blister applied to the chest, or between the shoulders, is sometimes serviceable.

When this complaint arises in persons of a sanguine habit, or florid complexion, whose strength is little or not at all impaired, the diet should be scanty, and of a mild vegetable description; all kinds of animal food, and fermented liquors must be forbidden, and the quantity of drink should be small. The use of acidulous fruits, as oranges, lemons, &c. and vegetable acids, are proper, and whatever food is taken should be cold. All muscular exertion, and even great exertion of mind, is hurtful. If, however, this malady occurs in an enfeebled constitution, the diet must be nourishing, though very mild, consisting of milk, eggs, the most digestible kinds of animal food, and a little white wine. Here change of air, and very gentle exercise, are advisable.

After the bleeding has stopped altogether, the patient must resort to means to prevent its recurrence in future, and, for this purpose, those who are of a full habit should constantly observe a mild and chiefly vegetable diet, and moderate exercise, with the occasional use of saline aperients, as No. 74, page 114; while those who are weakly and delicate, must endeavour to strengthen the chest, and constitution at large, by a cautious but continued use of the tonics above prescribed, with cold bathing, daily exercise proportioned to their strength, and change of air and scene.*

Those who are subject to a spitting of blood should carefully avoid elevated, cold, and bleak situations, and choose a flat or low country where the air is heavy. If the place is sheltered at the same time, it will be still more desirable. This advice is of great importance, as the most valuable remedies will generally fail of any good effect in this complaint, so long as the patient continues in an unfavourable situation.

* "If the bleeding appears to be excited by a violent cough, attended with irritation within the chest, expectorants, demulcents, leeching and cupping on the chest, blood-letting, and opiates, are particularly indicated. In such cases, frequent doses of flax-seed oil are said to be very beneficial. (*Journal de Medicine, tom.* xxx. *p.* 85.) When the cough is violent and spasmodic, and the pulse contracted and small, with a dry skin, small doses of camphor and ipecacuanha, with mucilaginous drinks, often procure great and speedy relief."—*Dr. Eberle's Practice of Medicine, vol.* i. *p.* 560.

OF SPINAL CURVATURE.

Distortion of the spine has of late years become very frequent, especially in young females. Correctly speaking, it is of two kinds: 1. Lateral distortion, arising from weakness or rickets; 2. Distortion forwards, arising from caries of the bones of the spine, or ulceration of the intervertebral substance.

The lateral distortion is usually to the right side, and is the kind of curvature now most commonly met with. The first circumstance that attracts attention in a beginning curvature of the spine is, one breast appearing larger than the other, or so unequal as to lead to a suspicion that it is growing out of its place; or the patient's friends are struck by the right shoulder appearing enlarged, and farther removed from the spine than the left. At the same time, there is generally an apparent enlargement of the left hip; so that the ordinary visible effects of the lateral distortion are, such a change in the appearance of the right shoulder, and hip on the opposite side, that mothers, in describing the state of their child, when the spine begins to be distorted, explain it as a *growing out of the right shoulder, and of the left hip.* In this condition, the patient, when in certain positions, appears to have one leg shorter than the other; and in walking, there is a constrained position of the head and neck, an inclination to one side, and also an inequality in the step.

If, when these appearances present themselves, the spine be examined, it will be found nearly in the form of an italic *f*, and perhaps with a slight bend outwards; and the whole of the right side will be of a rounded or barrel-like form, while the left is diminished and contracted, the ribs being closer together than is natural.

In the distortion forwards, the spine is bent forwards, that is, from within outwards, (not laterally,) so as to form an angle posteriorly. In most cases of this kind of disease in the spine, the lower limbs are sooner or later affected with some loss of the power of voluntary motion, and ultimately with complete paralysis. Indeed, on minute inquiry, it is found that languor, listlessness, unwillingness to move, and unsteadiness in motion, have preceded the visible disease of the spine, in a greater or less degree.

The *immediate cause* of the lateral curvature is debility, however induced, and affecting more especially the muscles and ligaments of the back. This debility may be induced by the want of sufficient general exercise, and especially of that which acts more immediately on the muscles of the back,—by

sitting long at work, or in practising on a musical instrument without artificial support,—by a habit of lounging on one leg, by indulging much in sleep on a soft bed with a high pillow,—by the fashionable but pernicious attempts that are made to correct the figure, or to model it into a certain form.

The lateral curvature is one among the many disorders of debility which have grown out of the errors of our present refinement; it is a part of the mischief resulting from the evils of moral and physical education.

The true cause of the distortion forwards, is a morbid state of the spine, or of some of the soft parts connected with it. This diseased state of parts will, upon careful inquiry, be always found to have preceded the deformity some length of time. The majority of those who labour under this kind of distortion are young children, and particularly those of a scrophulous habit; while the lateral curvature occurs most commonly in young females of from fifteen to one and twenty years of age.

Treatment. *The lateral curvature*, arising from weakness, is almost always curable if attended to in time. The indications of treatment are, to give due strength to the back, and whole constitution, by a proper and continued use of exercise and rest, nutritious food, and strengthening medicine. Gymnastic exercises are found to be of the highest value in this complaint, which I shall presently illustrate by an example. The exercise must be of the kind which will restore tone to a debilitated frame, and, therefore, it must be resorted to daily, the modes and degrees of it being varied and gradually increased, and it being always short of any particular fatigue. Friction and shampooing are species of exercise well adapted to this disease, since they have the power of giving tone to the back, and general system, without occasioning fatigue to the patient. Therefore, in addition to the gymnastic exercises, gentle friction over the chest, spine and limbs, should be practised once or twice a day.

Proper rest is of much consequence, because the patient being weak and easily fatigued, if a state of comfortable rest were not observed at those times when the necessary exercise is not resorted to, the weakest part would be likely to suffer from the effects of exhaustion and languor, and the spine, in consequence, to become more distorted. Occasional ease and rest should, consequently, be given to the muscles of the spine by the patient's lying down, either on an inclined plane, or on a couch, and this she should do whenever she feels fatigued, or a want of such rest. It has been a very common practice of late years to confine young ladies to the inclined plane, or to

the couch, for months together, often without their being allowed to rise during any part of the day, and this wearisome rest alone has been considered sufficient to cure the distortion; but the practice is extremely irrational and injurious, and should never be followed in lateral curvature. It invariably injures the general health, and by augmenting the debility of the muscles of the back and whole constitution, increases the curvature, and sometimes induces additional complaints of a serious nature. Sir Astley Cooper relates the case of a lady who submitted to this vile practice for many months, and in the end rose without any favourable alteration in the state of the spine, but with a disease in the bladder, which afterwards spread to the womb, and proved fatal.—*Lancet, vol.* ii. *p.* 464, 1823-4. Mr. Abernethy also objected to a state of constant recumbency, and to laying down in any constrained attitude. He says, "I would by no means deprive the patient from taking that degree of active exercise which is conducive to health." Patients afflicted with the present complaints should have rest, but it should be only occasional rest, taken at any time in the day that they find a need of it, and not continued so long as to interfere with the necessary exercises, or to injure the general health. The best thing for the patient to repose upon is a moderately hard hair mattress, which may be placed on an inclined plane, if preferred.

The food should be of a mild nutritive quality, consisting chiefly of broiled mutton or lamb chops, tender roast beef, fowl, venison, eggs, biscuit, tea, cocoa, or thin chocolate, the most digestible vegetables, and a little wine or malt liquor. The advice given on this subject under *Indigestion* is applicable here. Salubrious country air is highly advisable.

Sometimes the administration of steel, or vegetable bitters, will assist the foregoing means. The pills, No. 102, 103, or 115, page 124, may be taken, or the mixture, No. 82, or 83. The bowels must be carefully regulated by an occasional use of the pill, No. 100. Whenever there is an appearance of scrophula or rickets in the constitution, tonics, especially steel tonics, as No. 102, or 103, will be clearly indicated; and sometimes a tepid bath, at about ninety degrees, may be taken twice a week with great advantage.

In illustration of the good effects of gymnastic exercises, in cases of distorted spine, arising from debility, I transcribe the following case from Captain Clias's observations thereon.

"Miss A. B., aged sixteen years, had been affected for several years with a distortion of the spine, from the right to the left side, with general weakness, particularly of the arms and chest; she was extremely pale and thin; her sleep much disturbed, and her appetite nearly

gone; she had an obstinate cough; her voice was weak, and nearly inaudible. She had a continued pain in the left side, resulting from the pressure of stays, which she had worn for some months with the expectation of re-establishing the straight position of her back. Her head reclined upon her chest; and what are called the false ribs of the left side were bent one over the other, and forced inwards. In this condition the young lady was confided to my care, on the 22d of October, by a physician who had seen and visited her for some years. I may be allowed to say, that it was almost with repugnance that I engaged to employ my system of exercise in the case of a person who appeared to be nearly in a dying condition, but the entreaties of the relations, and the solicitations of the medical attendant, were so urgent, that I could not forbear making the trial. The table of exercises which I employed in this case, will give a just idea, to those persons who interest themselves in this practice, how far I deserved the confidence reposed in me.

"*Table of the Gymnastic Exercises resorted to in this case, by which the reader will perceive the slow but gradual manner in which patients, in such cases, proceed from slight exercises to those which require greater strength and exertion.*

"1. To make prolonged inspirations, sitting. 2. Prolonged inspirations, the patient standing, the arms fixed. 3. The same exercise, the arms hanging down. 4. The same, the arms extended horizontally. 5. The same, the arms fixed to a horizontal pole. 6. Deep inspiration, and counting a certain number without drawing the breath. 7. Movement of the feet on the ground, the patient sitting. 8. Deep inspiration, the patient lying on the left side, and leaning on the elbow. 9. In the same position to raise and to lower the body. 10. Walking slowly, and making deep inspirations. 11. Walking a little faster, and counting several steps without drawing breath. 12. Bending without rising, the weak hand fixed above. 13. Beating time, with both hands fixed to the horizontal pole. 14. 15. Beating time, bearing a weight in the weak hand. 16. 17. Lifting up a small box from the ground with both hands, and then with the weak hand. 18. 19. 20. To declaim without moving, and to sing without drawing breath. 21. 22. 23. Movements of balance simple, in front and on one side. 25. 26. 27. 28. Develop other motions of the arms, and to imitate the motion of sawing. 29. 30. These exercises with the weak hand only. 31. 32. To draw upon a spring with the weak hand only, and then with the arms and body fixed. 33. Seated on the ground, to rise with the assistance of the arms, the feet fixed. 34. Lying down horizontally, to raise the body without the assistance of the arms. Other exertions of a similar kind, which it is not necessary to describe, follow these.

"On the 27th of November, the cough having entirely ceased, and the progress of the patient giving me reason to expect the happiest results, I began to employ friction, during the exercise, on the diseased parts. At this time, I also took with her the first promenade, the weak arm supported, and afterwards in a carriage. On the 12th of January, she was so much recovered, that she could without inconvenience resume her lessons in singing, playing, and drawing, and walk several miles without fatigue. The cough and pain in the side had entirely ceased; she had an appearance of health, and her spirits were good. All the animal functions were perfectly restored."

In the distortion forwards, arising from disease in the bones

of the spine, or in the intervertebral substance, the most effectual means of cure are, perfect rest, and a large issue in the neighbourhood of the disease. The burning of moxa (see page 59,) on the affected part is sometimes likewise of great service in such cases.

OF STRANGURY, OR RETENTION OF URINE.

Strangury is an inability of properly expelling the urine contained in the bladder, the efforts to do so being attended with pain, and the urine passing by drops, sometimes not at all.

In this complaint, the distended bladder generally forms a hard and circumscribed tumour in the front of the lower part of the belly, giving pain to the patient when pressed with the hand; and if it be not speedily relieved, usually excites some degree of fever. There is a great difference in different cases, with regard to the quantity of urine passed in this complaint. In some instances, violent efforts to make water are excited at intervals, and, during the strainings, small quantities of urine are expelled, mostly in drops; in others, the patient may make water in a stream for once or twice, or more, and discharge a quantity equal to that which is commonly discharged by a person in health, yet still pain and distention of the bladder continue, till the pain is relieved by the introduction of a proper instrument, called a *catheter*, by which the accumulated water is drawn off. It also now and then happens, that after a good deal of pain and suffering, when the bladder has suffered its utmost distention, the urine runs off or dribbles away by the natural channel, as fast as it is excreted by the kidneys, but without lessening the quantity originally distending the bladder; and this circumstance has caused a serious misapprehension, on the part of the uninformed, of the true nature of the case.

It arises from many different *causes*, the chief of which are, strictures in the urethra; enlargement of the prostate gland; inflammation of the bladder; stones, or other foreign bodies, in the urethra; inflammation of the urethra; a want of tone in the bladder, induced by retaining its contents too long.

It is necessary to *distinguish* RETENTION from SUPPRESSION of urine. In the former complaint the urine is merely retained in the bladder from an inability to expel it by the natural efforts; in the latter, there is a partial or total defect in the secretion of this fluid by the kidneys.

TREATMENT. Every case of retention of urine demands

prompt assistance, but where the disorder presents itself in its complete form, the mischief of delay is of the most serious nature: for, if the bladder remain preternaturally distended, it not only loses its contractile power, but is quickly attacked with inflammation and sloughing; the bladder at last bursts, the urine is extravasated in the surrounding parts, and death is the consequence.

In general, the first step in the treatment of retention of urine should be, an attempt to draw off the collected urine, by the introduction of a catheter into the bladder. Where the complaint depends on inflammation, blood-letting, the warm bath, and a warm purgative clyster, No. 8, page 97, must be resorted to before attempting the introduction of the instrument. A discharge of the urine through the natural passage is effected more frequently by the use of the catheter than any other means, but whether it be successfully used or not, the proper means of lessening existing irritation in the parts affected must be employed; such are warm fomentations, the warm bath, bleeding, mucilaginous drinks, and opium combined with calomel, and followed by cooling medicines; for it must never be forgotten, that irritation of some kind or other is the common cause of the present malady, and this great object is to allay it by the above means, and this practice will be necessary whether the catheter be used or not.

The retention of urine to which persons of advanced age are liable, is generally owing to an enlargement of the prostate gland, and here the use of the catheter is of great service. If symptoms of inflammation exist, the patient should be immediately placed in a warm bath, warm fomentations should be used, and the other means just described. A grain of calomel, united with an equal quantity of opium and James's powder, and made into a pill, may also be given every four or five hours, if the symptoms of irritation are severe. This pill is sometimes of eminent service in the present complaint, and may be given in every variety of it. It is particularly indicated when great pain exists. Sir Astley Cooper says, that the catheter will always overcome the obstruction arising from an enlargement of the prostate, and that it is never necessary to puncture the bladder under such circumstances. He also cautions young surgeons from puncturing the bladder from the rectum in elderly persons, in consequence of this operation being frequently followed by troublesome consequences at an advanced age.

When the disease is produced by a stricture in the urethra, the means recommended for reducing inflammation must first be tried, such as the application of leeches to the neighbouring parts, bleeding from the arm, warm fomentations, and an opiate

clyster, as No. 9, page 97. The pill of calomel and opium is also proper; and when there is much spasmodic action present, Mr. Cline has recommended twenty drops of the muriated tincture of iron to be given in water every ten minutes. If these means fail to afford relief, the exhibition of a tobacco clyster may be resorted to, but only under the directions of a professional man. Sometimes, in this case, a fine bougie will admit of being passed into the bladder when a catheter will not, and on being withdrawn, the urine follows, and is discharged; and an attempt should, therefore, be made accordingly.—See STRICTURE.

Retention of urine from inflammation of the bladder is known by its sudden attack; the frequent desire to make water; the acute pain in the region of the bladder,—pain, which is increased by the efforts to make water, and which shoots up to the loins and along the urinary canal to the end of the glans; the frequency and hardness of the pulse; the aggravation of pain when pressure is made on the region of the bladder; and by the red inflammatory colour of the urine. When the complaint arises from inflammation in the urinary canal, (called urethra,) the symptoms are those of inflammation in general, as just described, but affecting more particularly the parts in the course of that canal; the private parts are swollen and tender; there is a scalding sensation in the passage; and when the patient makes a little water, he experiences a great deal of smarting, which is sometimes insupportable. I have already remarked, that in both these cases the usual means of reducing the inflammation, by bleeding, the warm bath, the exhibition of calomel and opium, &c. must be had recourse to directly, and vigorously followed up till the object is gained. When inflammation of the bladder gives rise to this disorder, the catheter should be directly introduced, so as to free that organ from the irritation which the pressure of the urine must occasion; but when the strangury is the consequence of inflammation in the urinary canal, (or urethra,) the employment of the catheter must be delayed until this inflammatory state has been reduced by the use of the foregoing measures, since the passing of instruments in this diseased condition of the canal cannot fail to create irritation.

When strangury is the effect of want of tone in the bladder, as an accompaniment of old age, or induced by retaining its contents too long, it will be necessary to introduce the catheter directly, and to repeat it twice or thrice a day until the organ recovers itself, which it usually does in a short time, without further assistance. The tincture of cantharides, in doses of twenty or thirty drops in water, twice or thrice a day, is an excellent remedy in this case. As soon as this medicine occa-

sions smarting in making water, it must be laid aside. Richter, an able German surgeon, states that in some cases of retention from paralysis of the bladder (that is, loss of tone,) almost immediate and very considerable relief was obtained by pouring water from the spout of a pitcher, in a stream descending several yards, upon the front and lower part of the belly—this, I think, a valuable remedy.

If the complaint arise from the free use of blisters, or other sources of simple irritation, the patient should drink very freely of warm diluting fluids, as barley-water, (No. 20, page 101,) or linseed tea, and a clyster of starch and opium, as No. 9, page 97, should be injected into the rectum, and repeated occasionally, if necessary. Fomentations to the region of the bladder are also proper.

When all the foregoing means fail of relieving the bladder from the accumulation of urine, that organ must, of course, be punctured.

I have before remarked, that a SUPPRESSION of urine is a partial or total defect in the excretion of this fluid by the kidneys. It arises from various causes, and is generally very little within the control of art. In general, perhaps, one of the most effectual plans of relief is, by administering the pill of calomel and opium above mentioned, or the pill No. 99, page 120, twice or thrice a day, in the beginning, and afterwards once a day, in conjunction with the use of the warm bath at ninety-six degrees every day, a mercurial plaster to the loins, and a mild diet, the bowels being kept in a lax state by the occasional employment of the mixture, No. 74, page 114, or the pills, No. 100, or 101. Both sarsaparilla and dandelion are worthy of notice in this disease.

OF STITCH, OR PAIN IN THE SIDE.

Stitch, or pain in the side, is generally symptomatic of some disorder in the lungs, or digestive organs, when it is to be removed by the means usually employed to restore those viscera to a healthy state; but sometimes it is not clearly connected with any primary affection of those parts, or if so connected, it is found to be so troublesome a symptom, as to call for particular attention, and, therefore, I am induced to notice it separately, and as a distinct complaint.—See NEURALGIA.

When it does not occur as symptomatic of a disorder in the lungs or stomach, it is usually occasioned by chronic inflammation of the pleura, that is, the membrane lining the cavity of the chest; by habitually forcing the chest, in writing, against the hard edge of a desk, or by the use of tight stays. If the

patient has reason to consider it to be owing to either of the two last causes, he may generally regard it as depending on this inflamed state of the pleura, especially if the pain is increased on pressure, and on taking a deep inspiration. In such a case, one of the best plans of treatment consists in giving a pill, composed of a grain of calomel, with the same quantity of James's powder and opium, every night, with one of the pills, No. 104, page 121, twice or thrice a day; the bowels being, at the same time, preserved regular by an occasional use of the pill, No. 100, or 101, and a blister applied to the chest or between the shoulders. Sometimes the application of a few leeches may be advisable, but I would recommend the preceding remedies to be fairly tried first. If the patient is of a very full habit, ten or twelve ounces of blood may be taken from the arm, and leeches be afterwards applied to the chest, should the preceding means have failed to cure. Exercise is of great consequence in these cases: it should be daily and freely taken.

Should close application to writing, or the use of tight stays, have given rise to this pain, it will of course be absolutely necessary that these causes are avoided in future. Without this, no great or permanent benefit can be gained from the prescriptions of the physician, but with it, the use of the means just noticed will seldom fail to remove the complaint.

When pain in the side is associated with a deranged state of the stomach and general health, and there is a good deal of general languor and debility, the above pill of calomel and opium, at night, will, for the most part, be found very useful, with which some mild tonic medicine ought to be given, during the day, such as the pill, No. 102, or 103, or the mixture, No. 82, 83, or 84. The bowels must be kept free from confinement, by the pills, No. 100, and a blister may be applied between the shoulders occasionally. The compound decoction of sarsaparilla also is sometimes a very useful medicine in this complaint.

OF STRICTURE.

The word stricture, in medical language, is intended to signify a contraction of some canal in the body, by which a part of the canal becomes narrower than the rest. Strictures most frequently occur in the *urethra* of men, and in the *rectum:* and I shall notice each of these maladies separately. This is a disorder never requiring any active treatment, but rather the exercise of *tact*, and mild appropriate measures.

OF STRICTURE IN THE URETHRA.*

This disease is so common, and often so alarming, as to demand the first and chief notice under the present head. There is no part of the urethra which may not be narrowed by a stricture; but the most common seats of this contraction appear to be about six inches and a half, and four inches and a half, from the external orifice. It may occupy only a very small extent of the passage, being such a constriction as would arise from the application of a piece of packthread round it, or it may extend for a considerable distance.

The *first symptoms* of which a patient afflicted with this disease most frequently complains, are an inability to retain his water so long as usual; an obscure uneasiness about the seat; and an alteration in the stream of urine, which, instead of being full and equal, is smaller than usual, and is forked, spiral, or scattered. The first symptom, just noticed, compels the patient to rise once or twice in the night, to void his urine, and he also generally finds that a greater force is necessary to its complete expulsion than he has been in the habit of exerting, in consequence of the resistance made to the free passage of the water by the stricture. Nocturnal emissions are a common symptom of this complaint; and sometimes there is a mucous discharge from the urethra, which is seen adhering to the bottom of the receiving vessel. When the disease is of a very aggravated nature, the urine will often become quite white, and be mixed with matter (pus,) or blood, there will be great difficulty and pain in voiding the urine, and likewise much general debility.

The *immediate cause* of stricture is a slow inflammation in the part affected, which occasions a thickening of the canal, and a deposition of adhesive matter around that thickening, so as to produce a diminution of the diameter of the canal; and, I conceive, that whatever gives rise to considerable irritation in the urethra, may prove a cause of stricture there. Hence the disease very frequently follows gonorrhœa; or it may be induced by drinking or riding hard, and by direct injury of the part. When a patient, labouring under gonorrhœa, is so imprudent as to indulge in hard riding, and free drinking, he exposes himself to the most powerful causes of the present malady, and such as rarely fail to produce it in its worst forms.

Sometimes, however, it is merely a spasmodic affection. Deranged health produces spasm, of various degrees of intensity, in many structures, indeed, it may induce it in any structure;

* The canal leading into the bladder.

and we cannot be surprised that spasm is frequently induced in the urethra by disorder of the general system. This is a case which of course yields more readily to medical treatment than the fixed stricture, and a curious example is referred to at page 77.

Treatment. When a surgeon suspects the existence of urethral stricture in any patient, the first thing he does is to pass a full-sized bougie* down the canal, in order to ascertain whether his conjecture be well founded or not. For it is clear that if there be any contraction in the tube, the bougie will stop when it arrives at the part in which it is situated, and thus place the reality of the complaint beyond all doubt; but if there be no contraction, the instrument will slide completely into the bladder. The existence, form, and situation of the stricture being thus ascertained, the next subject for consideration is, how it is to be cured or relieved. When the patient is able to procure the assistance of an able medical practitioner, he should immediately avail himself of it, and implicitly adhere to the instructions given; but, unhappily, ignorance and inattention are much more common than their opposites, and it is an indisputable fact, that a vast number of persons afflicted with the present complaint, find it a difficult matter to obtain judicious and efficient aid, and even some who enjoy ample pecuniary means, attain to it only after a long and painful search. I shall, therefore, state, in as few words as possible, the proper mode of proceeding in urethral stricture, and I am persuaded, that attention to the advice here given, will seldom fail to be productive of much advantage, and in many instances will be followed by results highly satisfactory.

The dilatation of the strictural part is to be accomplished chiefly by a frequent use of the bougie; and it is to a skilful use of this instrument, that the most able surgeons of the present day trust for the cure of the disease. A small-sized bougie must be introduced through the stricture once a day, or once in two days, and allowed to remain at first for five or ten minutes, the time being afterwards gradually lengthened to half an hour, or an hour, or longer. If possible, no pain should be produced in passing the instrument, and the moment any particular uneasiness is felt from its presence, it should be withdrawn. In the beginning, one of the smallest size bougies will in general be necessary, in order to succeed in passing the stricture; and in increasing the size, we must be regulated by the facility with which the stricture becomes dilated, and the ease with which

* A bougie is a long smooth flexible instrument, usually made of linen or lint rolled into a proper shape, and then dipped into a mixture of wax and lard, &c.

the patient bears the dilatation. If the size of this instrument can be gradually augmented, it should satisfy us, and this advantage ought to be followed up till a bougie of a large size can pass freely. In my opinion, no bougies larger than those usually numbered 13, should ever be used.

Bougies are of various kinds, but those made of wax and silver are the best. The common wax bougie appears to me decidedly the best for all ordinary occasions. When the stricture is particularly small, it is sometimes necessary to employ a catgut bougie, in the first instance. Sir Astley Cooper generally uses a conical silver bougie.

The great art in using this instrument well, consists in passing it down the canal with as much gentleness, and, therefore, so as to occasion as little irritation as possible. It should be introduced slowly, and when it arrives at the stricture, allowed to rest there for a few seconds, then the operator must press it forward very gently, and if it be still obstructed in its passage, a longer rest ought to be observed, and thus by humouring the part, the bougie will often at length pass, when a less gentle mode of proceeding would entirely fail in carrying it into the bladder. For want of attention to the principle on which these directions are founded, many surgeons not only fail to pass a bougie in cases of stricture, but are the cause of much mischief. An eminent surgeon in London, remarkable for his eccentricity, and, I am happy to add, no less so for his mild and soothing plan of treating all diseases, has remarked, in my hearing, that not one surgeon in a thousand should pass a bougie for him. He conceives the usual mode of its introduction to be much too irritating. Wax bougies should always be warmed a little, curved, and smeared with olive oil, before being used.

At the same time that we use the bougie, great attention ought to be paid to improve the state of the general health. The bowels should be carefully regulated by diet and mild medicine, as No. 100, page 120; the condition of the stomach be improved by the use of alkalies, bitters, steel or other tonics, as the circumstances of the case point out; and the diet must be carefully regulated, as recommended under INDIGESTION. The compound decoction of sarsaparilla is often a very good medicine here, which may be taken in doses of half a pint twice a day, with one of the pills, No. 99, page 120, every night.

The profession seldom employ any local means of relief in this disease, except the use of the bougie; but there is a medicine which I would strongly recommend to the notice of persons afflicted with stricture—I mean the hydriodate of potash. Half a drachm of this salt, mixed with an ounce and a half of hog's lard, forms an ointment, of which the size of a

nut may be rubbed along the course of the urethra once or twice a day, for a fortnight, with great advantage. This preparation has unquestionably a remarkable power in promoting absorption, and I know from experience, that it will often succeed effectually in allaying irritation in this canal, so as to render the introduction of a bougie easy, which before its use was impossible. I have never known this medicine employed in stricture by any other person, but am, nevertheless, fully persuaded that it is worthy the attention of all medical practitioners, more especially in the severer forms of this malady.

Some time since it was much the fashion to use bougies armed with caustic, with the view of gradually destroying the stricture, and I regret to say, that the injuries committed by it were incalculable in number, and almost inconceivable in severity. It is a vile and dangerous practice, which no considerate surgeon will now ever resort to, except in cases of extremity, and then very seldom. Sir Astley Cooper's opinion is, that it ought never to be employed, unless the stricture be accompanied with fistula in *perinæo*, and that fistula behind the stricture.

The preceding remarks refer to cases of established or *permanent* stricture, but sometimes a patient is suddenly seized with a difficulty or impossibility of making water, although a few hours before he may have passed it in a full stream, and with great ease—this is called *spasmodic* stricture. To relieve this sudden or spasmodic stricture, let the ointment of hydriodate of potash, above prescribed, be rubbed freely along the surface of the canal, the patient taking at the same time a grain of Turkey opium, a grain of calomel, and two grains of James's powder, made into a pill with conserve of hips, which pill may be repeated in half an hour, or an hour, if necessary. The muriated tincture of iron, in doses of fifteen or twenty drops, in water, every half hour, or hour, till relief is obtained, is likewise sometimes a valuable medicine. Lime-water is also occasionally of much service; and the warm bath is proper. Whatever medicine is taken, it is generally advisable to endeavour to introduce a bougie or catheter into the bladder; but it must be done very slowly, and with as much gentleness as possible. The point of the bougie may be smeared with extract of belladonna. In general, I think it far best to use the iodine ointment, and the pill of calomel and opium, before attempting to pass the catheter.

In concluding this article, I would earnestly recommend the strictured patient to take for his motto this sentence—THE RELIEF OF IRRITATION IS THE GREAT OBJECT OF MEDICINE. Throughout this volume I have endeavoured to impress the

minds of my readers with the value and importance of this sentiment, because in all cases of severe protracted disease, an adherence to it will be found of immediate and lasting benefit, and in no complaint is it capable of conferring greater advantages than in that now under consideration. In stricture, indeed, it is worthy of particular attention, since both patient and surgeon are too often eager to effect a great change in a short time, and evince such impatience when obstacles occur to its accomplishment, as very frequently leads to the aggravation of the malady. If the means made use of are mild, soothing, and appropriate, as those noticed above, no strictured patient need fear any evil consequences from his complaint, but let him bear in mind, that he has every thing to dread from harsh and violent measures.

OF STRICTURE IN THE RECTUM.*

This is a disease of precisely the same nature as that last treated of, differing in general only in its seat, which, instead of being the urethral tube, is the last intestine. It is of frequent occurrence, and often exists a long time without being detected.†

Its chief *symptoms* are habitual costiveness; considerable irritation about the anus, the patient being generally troubled with piles, uneasiness on going to stool, discharge of blood, and prolapsus ani; flatulence; frequent pain in the *sacrum*, sometimes extending down the thigh, in the course of the large nerves. Very frequently there is a great deal of difficulty in passing the motions, which are of small size, and figured.

Whatever produces great disorder or weakness in the bowels may prove a cause of strictured rectum.

Treatment. This disease is generally to be cured by passing a rectum bougie through the stricture daily, or once in two or three days, which must remain at first for ten or twenty minutes, the time being afterwards increased to two, three, or four hours, or longer. The directions given under stricture of the urethra respecting the use of bougies, are strictly applicable here, excepting that the size of the instrument must, of course, be larger. A rectum bougie of a small size must be

* The rectum is the last intestine.

† Talma, the well known French tragic actor, died from the effects of an undiscovered stricture in the rectum. He had experienced, for some years before his death, a difficulty in evacuating the bowels; and would frequently go in great haste to the water closet, thinking there was a copious motion to come away, and yet, when the attempt was made, nothing but air, or a minute quantity of liquid fæces would escape. The body was examined after death, and, from the appearances that presented themselves, it seems probable, that a timely use of the bougie would have saved his life.

gently passed first, and the size gradually augmented. The common rectum bougies I decidedly object to, on account of their irritating quality, and advise them never to be employed. The best sort are made by rolling a long piece of lint very carefully and closely together, which, after it is stitched neatly up on one side, and tied with a piece of string at one end, must be dipped twice in a mixture of lard and yellow wax melted together:—the proportions should be one part of wax to three of lard. During the employment of the bougie, the bowels should be kept very gently open by an occasional use of a little castor oil, or decoction of aloes, or the pill No. 100, or 101, page 121.

Most persons afflicted with this malady, are distressed by frequent fits of severe nervous agitation and irritability, which are found to come on whenever the bowels are more disordered than ordinary. Such patients, if properly treated when the stricture is discovered, always gain much relief, and are often restored to a state of good health, and comfortable feeling, to which they may have been perfect strangers for years. I am superintending a case of this description at the time (1830) this sheet is going through the press. I would, however, caution my readers against the practices of some people who think, or affect to think, almost every one has a strictured rectum, a cherished conceit which they fail not to turn to their own profit,—at least, if that money can be considered profitable which is ill-gotten.

OF A STYE.

The stye is strictly only a little boil, which projects from the edge of the eyelid. It is of a dark red colour, much inflamed, and occasionally a great deal more painful than might be expected, considering its small size. It usually disappears of itself after a little time, especially if some purgative medicine be taken. If, however, it should be very painful and inflamed, a small warm poultice of linseed meal, or bread and milk, must be laid over it, and renewed every five or six hours, and the bowels be freely acted upon by a purgative draught, as No. 74, page 114, or No. 28, page 103. When the stye appears ripe, an opening should be made into it with the point of a lancet, or large needle, and afterwards a little of the ointment, No. 88, page 117, may be smeared over it once or twice a day. Those who are much troubled with this complaint should pursue the alterative plan advised under CHRONIC DISEASE, at page 300.

OF SUPPRESSION OF THE MENSES.

I have already treated of chlorosis, or *retention* of the menses, which is the complaint of young girls, in whom this discharge has never properly appeared; and have now to advert to a *suppression* of the menses, which signifies an interruption to the discharge, occurring at any time of life after it has become habitual. It may, therefore, occur in women of any age, previous to forty-five or fifty.

Of course, the chief symptom is the disappearance of the usual monthly discharge, with which various strange and unusual feelings are associated, and differing in different individuals, such are, a feverish heat and dryness of the skin, flushing of the face, head-ache, pains in the loins and back, costiveness, difficulty of breathing, palpitation of the heart, and sometimes bleeding from the nose, stomach, or lungs.

The most frequent *causes* of this suppression are, great anxiety of mind; suddenly suppressed perspiration from cold, especially if occurring while the discharge was flowing; sudden alarm or terror; protracted fever; scanty and poor living; or some very considerable disorder in the constitution.

TREATMENT. It demands especial attention that there are two states of the system in which *suppression* may be found, viz. *the first*, where there is a morbid fulness, with a quick, tense, or full pulse, severe head-ache, and perhaps flushings of the face;—*the second*, where debility evidently exists, the pulse being feeble.

In the first case, it will be advisable for the patient to lose a little blood from the arm, to have the bowels fully relieved by the mixture, No. 73, page 114, and for the first days of treatment to observe a vegetable diet. After this, we may give a drachm of madder thrice a day, and if we do this near the period at which the menses should appear, we are more likely to be successful. If the madder fails, the tincture of cantharides may be tried, in doses of thirty-five or forty drops, thrice a day in water. This is a more effectual remedy than the madder, but not generally so much so as the volatile tincture of guaiacum. There is ample proof afforded by the results of medical practice, that this preparation merits greater confidence in this disorder than any other medicine at present known. A tea-spoonful may be taken every morning, noon, and evening, in a wine-glassful of milk, or, if wine agrees with the patient, in sherry wine and water. The tincture of guaiacum is a strong stimulant, and will, therefore, require particular attention to the preparatory treatment above advised, in respect to

purgatives, low diet, &c. in those females who are of a full habit, with an irritable pulse.

In the second case, the volatile tincture of guaiacum is the best remedy, with which we may combine a mild nutritious diet. In all cases, daily friction over the loins and lower part of the abdomen will be proper, and the bowels must be kept in a lax state by the use of five or six grains, or more, of the compound powder of aloes, every other night. The warm bath, at ninety-four degrees, should also be used thrice a week. Daily gentle exercise, on foot and on horseback alternately, is invariably advisable, and the diet should be mild and nutritious.

Besides the foregoing remedies, the application of electricity, or of Lavagna's injection, may be tried in obstinate cases. The electric fluid passed through the pelvis, is sometimes very effectual in restoring the discharge, and so is the injection into the womb of ten or twelve drops of the volatile alkali, as advised by an Italian physician of the name of Lavagna. This quantity of the alkali should be mixed with two table-spoonfuls of warm milk, and injected two or three times a day.

The spurred rye, sometimes called *ergot of rye*, (page 32,) has lately been recommended as a valuable remedy in the present disease. It has certainly a peculiar tendency to stimulate the organs in the lower part of the belly, and is, therefore, worthy of trial in cases which resist the employment of the means above noticed. An ounce of spurred rye should be boiled down in a quart of water to a pint, and four table-spoonfuls of the strained liquor be taken three or four times a day. It is very active in its operation, and must be used cautiously. It generally produces its effects in four or five days.

If the suspension should have suddenly occurred during the flow of the menses, blood-letting will be absolutely necessary. See *my Treatise on the Diseases of Females.*

OF TENESMUS, OR STRAINING.

Tenesmus is a painful and frequent desire to go to stool, attended with straining, and a discharge of little else than mucus, in small quantities. Sometimes it is intolerably severe, and accompanied with a protrusion of the gut, and the mucous discharge is tinged with blood.

This complaint is generally a symptom of dysentery, or bloody flux, but is now and then met with as an original affection, when it usually arises from an injudicious use of acrid purgatives, especially of aloes, from the passage of acrid humours, local exposure to cold, or severe costiveness.

In general, the best means of relief are, to take five grains of the compound powder of ipecacuanha, twice or thrice a day, or as occasion requires, and to throw into the rectum the opiate injection, No. 9, page 97; or a pill, composed of a grain of blue pill, a grain of extract of henbane, and three grains of compound ipecacuanha powder, will be found sometimes still more serviceable. If, however, the complaint originates in a confined state of the bowels, they must be first cleared by the use of a mild purgative clyster, as No. 8, or by taking some aperient medicine, as No. 74, page 114; and after they have operated, the above means should be had recourse to. When the straining is very severe, and has induced a degree of inflammation in the parts, a few leeches may also be applied in the neighbourhood of the anus, and the parts afterwards washed with the lotion, No. 69, or 72.

When the gut is protruded, it must be carefully replaced directly, by the patient gently pressing it upwards with his two fore-fingers, a fomentation with warm or cold water being previously used if necessary.

OF TETANUS.

Tetanus is a violent and extensive contraction of the muscles, attended with tension and rigidity of the parts affected. The excessive contraction of the muscles is kept up, without any intervals of complete relaxation, mostly without any relaxation whatever; but the powers of sensation and intellect are unimpaired.

Either the whole or a part of the body may be attacked with this malady. Sometimes only the flexor muscles are affected, when the body is rigidly bent forwards; sometimes only the extensor muscles, when it is as rigidly bent backwards; at other times both sets of muscles are involved, and the body is rigidly erect. When its effects are confined to the muscles of the jaw or throat, it is called locked-jaw.

This disease differs greatly, in different cases, in the intensity of its *symptoms*, and in the mode in which it makes its attack. Generally speaking, the commencement of the disorder is announced by a sensation of stiffness about the neck, which increasing, the motion of the head becomes painful, and there is a difficulty and pain in swallowing; there is also a severe pain at the bottom of the breast-bone, darting backwards to the spine; the spasms of all the muscles of the neck become exceedingly violent, and, together with the spasm at the pit of the stomach, recur every ten, fifteen, or twenty minutes; at the same time that the spasms increase, the retraction and rigidity

of the muscles affected become stronger, the belly feels as hard and tense as a board, and the body is drawn forward, backward, or to one side, according to the muscles chiefly affected. In the extreme period of the disease, one set of muscles contract so powerfully as to counterbalance the force of the opposite set, and hold the head and trunk in a straight, fixed, and immoveable position. The muscular contractions in tetanus are always accompanied with the most excruciating pain, and when the disease arrives at its height, a violent convulsion usually puts an end to the patient's misery.

The most *common causes* are, scratches, punctures, lacerations, or other mechanical injuries. Considerable irritation in the digestive organs seems also sometimes to give rise to this disease. It is much more frequent in warm than in temperate climates, and especially in the hot seasons of those climates, and in marshy situations. The male sex more frequently suffer than the female; and the robust and vigorous more frequently than the weak.

Treatment. Tetanus is a dangerous malady, and medical men are not yet agreed respecting the most effectual remedies for it. It is clear, however, that a principal point is to remove all sources of irritation; and the exhibition of calomel and opium,—opium, camphor, and nitre,—opium, and ipecacuanha, as in Dover's powder,—and mild purgatives of calomel, jalap, and rhubarb, seem to have been the most useful means, when used in conjunction with the warm or cold bath, and bloodletting, as the circumstances of the case point out.

A proper plan in most cases is, to give two grains of opium, and a grain of calomel, made into a pill, with a little mucilage of gum arabic, every three or four hours, with a mild purgative, as castor oil, or No. 120, page 125, or No. 74, page 114, every morning, or every other morning, allowing a generous diet, with a few glasses of good wine daily. In addition to these means, the cold bath is generally safe when the disease occurs in a hot climate, and is sometimes of great service, especially when it arises from other causes than a wound. It has not appeared applicable to tetanus arising from wounds, and, in all cases, is most proper when the heat of the body is not below the natural standard. It may be repeated, if necessary, every three or four hours. The cold bath has been strongly recommended in this disease by many physicians, and appears to be preferred at the present time throughout the West Indies.

The French surgeon-general, Larrey, states, that he found a combination of extract of opium, camphor, nitre, and almond emulsion, the most useful medicine in this disease; and it may therefore, be taken if preferred, instead of the calomel and

opium, recommended above. A grain of extract of opium, ten grains of camphor, and five grains of nitre, may be mixed in a mortar, with an ounce and a half of almond emulsion, (page 107) and given four or five times a day. The compound powder of ipecacuanha (Dover's powder) is also said to have been useful. It is, no doubt, a valuable medicine in allaying general irritation, and may be taken in this complaint in doses of ten grains, every three or four hours. Instead of the calomel and opium above advised, some practitioners recommend large doses of opium alone, for example, five or ten grains of this substance in its crude state, every three or four hours, and this practice appears to have been attended with success; but in general I should place much greater dependence upon free doses of Dover's powder, in conjunction with a small proportion of calomel, or moderate doses of calomel combined with opium. Dr. O'Beirne, of Ireland, asserts, that he has found an injection of tobacco infusion of great service in several cases.

If the patient be of a full habit, especially if he has a wound which is inflamed, swelled, and painful, twelve or fourteen ounces of blood may be advantageously taken from the arm.*

When tetanus occurs in a debilitated subject, the tonic plan of treatment recommended by Dr. Rush, of America, may be employed, and ether, carbonate of ammonia, in doses of ten grains, bark, and a liberal quantity of wine, may be taken. The sulphate of quinine may probably be useful in such instances.

But frequently the patient is unable to swallow, and then the medicines used must be injected into the rectum.

If tetanus originates from a puncture, or any other kind of wound, it is advisable to sooth the irritation existing in it by the use of mild anodyne applications, and, perhaps, there is nothing superior, if equal, to a watery solution of opium. A sufficient quantity of solid opium to cover the wound should be liquefied with a little water, and laid over the surface with a feather or camel's hair pencil. This is the application made

* "I cannot avoid taking this opportunity of making public my experience of the powerful influence of cupping *along the spine*, in relieving the spasmodic rigidity of the muscles in tetanus, in conjunction with the exhibition of cathartic glysters, as long as the pain remains fixed; and purgatives, combined with opium, on the first moment that any relaxation of the spasm permits their introduction into the stomach. I have had an opportunity of witnessing the successful effects of this plan of treatment in two cases; one of which was a case of *traumatic tetanus*. Blood was drawn from the cervical (neck) portion only of the spine; but dry cupping was employed throughout the whole length of the spine three times a day. The patient informed me that each time the cups were applied, the acute pain under the apex of the sternum was always relieved, and did not return for some time afterwards." *Dr. A. T. Thomson's Elements of Materia Medica*, vol. ii. p. 372. The cupping along the spine is what I very much approve in this disease: even dry cupping is a valuable remedy, and it is easily performed. Cases showing its efficacy in painful affections, together with the mode of its application, may be seen in my publication *on the Diseases of Women*.

use of by Sir Astley Cooper. In some cases, lunar caustic might be useful.

The treatment proper for *locked-jaw* is the same as above described, and mild aperients, with Dover's powder, or calomel and opium, with a generous diet, and the cold bath, will be found the best remedies. The locked-jaw of infants and very young children, almost invariably arises from irritation in the stomach and bowels, and is most successfully treated by the frequent exhibition of mild aperients, as castor oil, or No. 120, page 125, with an occasional purgative clyster, as No. 8, page 97. A mixture of small doses of camphor, ipecacuanha wine, and the almond emulsion may also be given. Some physicians advise opium to be given, but this medicine so generally and greatly disagrees with infants, that if ever I employed it, it would be in combination with ipecacuanha, as in Dover's powder, a grain or two of which might be administered to a very young child, every three hours, in extreme cases.

OF TIC DOULOUREUX.

This is a dreadfully painful affection of the nerves of the face; at least, it occurs most frequently in the face, although other parts of the body are now and then attacked with it. The pain experienced by those afflicted with this malady is of the most acute, distressing, and indescribable kind; it is not continual, but occurs in violent paroxysms, which often make their attack like the sudden and painful shocks of electricity, and vary in duration in different instances.

When tic douloureux occurs in the face, its most common seats are the forehead and temple, or the fore part of the cheek. In the former case, the agonizing pain darts into the inner angle and ball of the eye, and in its progress affects the whole side of the head; in the latter it strikes towards the mouth and angles of the nose, then backward to the ear, and sometimes spreads upward to the forehead.

Its *causes* are often involved in some obscurity; but, frequently, they are sufficiently clear, and are found to consist in great derangement of the digestive organs, and general health. I am persuaded this derangement is by far the most frequent cause of tic douloureux; no man will deny that it is equal to the effect, and the evidences of its existence are very often, perhaps generally, equally apparent.

This disease is *distinguished* from rheumatism, and tooth-ache, by the agonizing violence of the pain, the shortness of its duration, and the absence of all swelling or inflammation; it is also sometimes excited by the slightest touch.

TREATMENT. As I believe the majority of cases of tic douloureux to originate in severe disorder of the digestive organs, I have no doubt, that the best and most successful plan of treatment consists in correcting that disorder, and invigorating the general habit, by the administration of suitable aperients, alteratives, and tonics, combined with a perpetual blister, or an issue, change of air and scene, and a correct diet and regimen. From the accounts which have been published of cases of the disease successfully treated, it clearly appears, that a very considerable majority of them were cured by the preceding means alone.

Costiveness, or an irregular and disordered condition of the bowels, with furred tongue, and other symptoms of abdominal derangement, have very generally prevailed in the cases of this disease which I have seen, or heard of; and I would recommend particular attention being paid to the regulation of the bowels, by means of attention to diet, and the use of mild aperients, and to the restoration of healthy secretions from all the digestive viscera, by having recourse to mercurial and other alteratives, in conjunction with tonics, daily active exercise, &c. The patient should take the aperient pill, No. 100, or 101, page 121, at first every other night, with the pill, No. 98, or 99, page 120, on the alternate night, and a grain of sulphate of quinine, and half a grain of ipecacuanha powder, made into a pill with extract of gentian, three times a day. On this plan, the dose of sulphate of quinine may be gradually increased to two or three grains, or more, thrice a day, if it be found to agree; and if one of the pills, No. 100, or 101, be not sufficient to move and clear the bowels gently, two may be taken, or they may be occasionally dropped for three or four days, and the morning draught, No. 27, or 28, page 103, substituted. Delicate persons will, for the most part, find the pills agree with them best, and will find an increasing advantage from continuing them regularly, as above directed; but stronger patients will sometimes be greatly benefited by an occasional resort to the saline aperients, No. 27, 28, or 74. In this, as well as in many other points, the patient must be guided, in some measure, by his own feelings; while he constantly remembers, that his chief objects are, to preserve the bowels in rather a lax condition, without teazing and irritating them, to allay internal irritation arising from other causes, and to invigorate the general habit. Together with the preceding remedies, a warm bath at ninety-five degrees may be advantageously taken thrice a week, and the painful part freely rubbed occasionally with the embrocation, No. 46, page 107. In most instances, a perpetual blister, or an issue, between the shoulders, or a seton in the nape of the neck, will be found a valuable auxiliary; and if the stools are much

discoloured, I would advise the pill, No. 99, or 117, to be taken every night.

The carbonate of iron has lately been strongly recommended as a tonic in this complaint, and if the sulphate of quinine fail to afford the patient satisfactory relief, it may be changed for the iron, eight or ten grains of which may be taken thrice a day, and gradually increased to one, two, or even three scruples at a dose. It will sit better on the stomach if two or three grains of aromatic powder are taken with each quantity; and, if it confine the bowels, a very small proportion of powdered aloes should also be added.

The arsenical solution appears to have been useful in some cases, and may be tried when other medicines fail. It certainly has sometimes a considerable power of allaying internal irritation. The mode of taking it is described at page 5. The extract of belladonna is also another article which has occasionally succeeded. It is a very active substance, and if the patient wishes to try it, he may begin with a pill containing half a grain, repeated thrice a day, and gradually increased to two, three, or even four grains, at a dose. Belladonna is unquestionably a valuable anodyne in this malady, and in many instances it may be advisable to employ it simply as such, to mitigate the violence of the pain, while we trust to the administration of a direct tonic medicine, and a suitable diet and regimen, to effect a perfect and lasting cure.

But I am desirous of impressing the sufferer with the necessity of constant attention to a correct diet and regimen, and to the regulation of the bowels, whatever medicine be resorted to. Whether, therefore, he take the carbonate of iron, sulphate of quinine, arsenic, or belladonna, he should resort to active daily exercise in the country, on foot, or horseback, he should retire and rise early; should, if practicable, change the air and scene, and regulate his diet and regimen by the principles laid down under INDIGESTION, and at page 304. The more I see of the nature and treatment of tic douloureux, the more entirely am I convinced of the absolute necessity of attention to these means, in order to obtain much permanent relief in the majority of cases. Every medical man of observation, who has seen this disease frequently, must acknowledge, that instances continually occur in which steel, quinine, and arsenic, fail of any curative, or even satisfactory effect, if the patient trusts to either of them alone. I repeat, a great deal of active exercise, and rather a spare diet of nutritious food of easy digestion, are essential to a cure in the majority of cases.

The operation of dividing the trunk of the affected nerve is sometimes resorted to, and if the complaint originate in local

causes, as from some source of irritation fixed in or near the affected part, and directly irritating the nerve, may frequently be effectual, and the best mode of treatment. But if it arise from derangement of the digestive functions, the operation will generally fall short in affording much relief, and the little advantage gained will not be permanent; sometimes, under such circumstances, it fails altogether.

Some professional men have advised the liberal use of mercury; but I warn the patient against the practice. It should never be tried, unless recommended by an able and considerate practitioner, not blindly devoted to the employment of calomel. If properly used, in small doses, it will often be of uncommon service. The application of leeches to the neighbourhood of the painful part, although frequently practised, is, in my opinion, more likely to do harm than good, particularly if freely applied. They tend to reduce the general strength, and, therefore, to augment the general irritability, without influencing the local affection.

OF TOOTH-ACHE.

Tooth-ache proves sometimes a very troublesome and distressing malady, from attacking the sufferer frequently, and proving uncommonly severe and obstinate in its character. In this case, I have found it almost constantly to arise from constitutional causes, and chiefly from an imperfect state of the digestive functions, accompanied with costiveness. This is the most frequent cause of a caries or decay in the substance of the teeth, although not the only one, since we sometimes meet with carious teeth in robust persons, enjoying apparently high health. Yet, even in persons of the latter description, suffering from tooth-ache, I have generally found a costive habit of body, or other symptoms of internal disorder. This pain may also be induced by cold,—the excessive use of mercury,—rheumatism,—or pregnancy.

Treatment. The more I witness of disease, and the effects of various remedies, the more strongly am I convinced of the dependence of local affections, in whatever form appearing, upon constitutional derangement. By many the teeth are considered not to be so much within the influence of the disorders of the general system, as the soft parts, and hence the usual indifference to constitutional treatment in this complaint, and the entire dependence on local management. But in reality the teeth are not less influenced by the state of the constitution than the soft parts of the body, and it will, therefore, be found that the most rational and successful treatment of tooth-ache is

that which best succeeds in carrying off vitiated humours, improving the secretions, and augmenting the strength.

In a fit of tooth-ache, I in consequence advise the patient immediately to take some active aperient, which will operate speedily, as one of the pills, No. 97, with the draught, No. 28, assisting their operation by sipping frequently a little warm slop. So soon as the bowels are freely opened, the patient usually experiences much relief; and after this, one of the best plans of treatment that can be adopted is, to preserve a regular state of the bowels by attention to diet, and the occasional use of the clyster machine, or the pills, No. 100, or 101, page 121, and, at the same time, to endeavour to improve the condition of the digestive functions by resorting to daily active exercise, friction over the region of the stomach and bowels, and the use of some mild stomachic or tonic. As a tonic, the pills, No. 102, 103, or 104, will be found useful, particularly the first and last number. This is a rational plan when the pain originates in internal irritation, and is certainly the most successful means of curing the affection, when it admits of cure, and when it does not, of lessening its frequency and severity.

If the pain appear to be of a rheumatic character, the means pointed out under chronic rheumatism or lumbago, should be used. Here,* four grains of compound ipecacuanha powder may be taken, twice or thrice a day, and the parts fomented with a decoction of poppy heads and chamomile flowers, or rubbed with a stimulating embrocation, as No. 45, or 46, page 106. A blister behind the ears will sometimes be of great service.

But whatever general remedies are made use of, local means of relief are always called for, and generally serviceable. If the tooth be carious, a grain of opium, and a grain of camphor, may be made into a pill, and inserted in the hollow; or a small piece of lint, dipped in strong compound tincture of benjamin, may be put into it, and another piece placed along the gum. This tincture I have found very useful. Another very beneficial application is formed of two drachms of camphor dissolved in an ounce of oil of turpentine, which is to be applied by means of lint, as just advised. It is said, that the insertion of a piece of gall nut into a decayed tooth is an effectual remedy for the pain. Rubbing the gum and side of the face with oil of cajeput, or of cloves, will also sometimes be very useful. Dr. Blake says, he has been enabled to cure the most desperate cases of tooth-ache, (unless the disease were connected with rheumatism,) by the application of the following remedy to the diseased tooth by means of lint:—take of alum, in impalpable powder,

* In tooth-ache from pregnancy the tooth should never be drawn.—See the reasons in my publication *on the Diseases of Females*.

two drachms; sweet spirit of nitre, seven drachms:—Mix them.

Nitric acid has been applied with much success. The effect of its use is often immediate, and no pain whatever is induced. The best mode of applying it is by means of lint wrapped round a probe, and moistened with the acid, which is then to be slowly applied to the cavity of the tooth; care being taken not to touch the other teeth, the gums, or the cheek. The mouth is next to be washed with tepid water. The acid should thus be applied to the whole cavity of the tooth, or otherwise a second application will be required before complete relief will be obtained.

This acid may be used when the gum and cheek are inflamed, so as to preclude the possibility of extraction. In cases where the diseased fang remains, and when the caries faces the adjacent tooth, it obviates the necessity of extraction in all cases of hollow teeth.

The best local application for tooth-ache that I am acquainted with, is warm salt and water. It should be made as strong as possible, a little taken into the mouth, and held for some minutes on and around the painful tooth, when it may be rejected, and a little more taken into the mouth: two or three of such applitions generally succeed in affording relief.

When the above medicines are not at hand, or have been tried in vain, the mastication of pungent, aromatic, and stimulating plants, will sometimes succeed in relieving the pain, such as ginger, horse-radish, common hartwort, or pellitory root.

Those who are subject to tooth-ache, ought to be particular in keeping the teeth clean by the frequent use of a soft brush and water, and the occasional use of a suitable dentifrice. Flowers of sulphur, and charcoal powder are among the best dentifrices; the former may be used every day, and the latter twice a week. The best common charcoal powder should be employed, not the *prepared charcoal*, which is too often a combination of hurtful ingredients. When the gums are loose or spongy, a powder composed of equal parts of Peruvian bark, powder of catechu, and armenian bole, will be found a valuable dentifrice, and may be used three or four times a week. I have known this to be of essential service in preventing the return of tooth-ache.

Persons with carious teeth are frequently advised to have the hollows stopped with tin-foil, leaf-lead, gum-lac, or other substances, and if the cavity formed by the caries be particularly sensible, and the foregoing means fail of success, it may sometimes be very useful. But I believe it far more frequently fails than succeeds in proving advantageous, for, in the gene-

rality of cases, the opening continues to enlarge, and the substance inserted soon becomes loose and troublesome.

In conclusion, I would strongly advise the patient never to have a tooth extracted, till he certainly finds he cannot retain it any longer with safety or satisfaction; for the practice of drawing teeth immediately a patient complains of a severe pain in them, and there is a slight caries or decay, is far too common, and is attended with many disadvantages. Celsus, an ancient writer on surgery of great celebrity, warns us against this practice, and I believe it is reprobated by many of the most able dentists of the present day.

OF TUMOURS.

By the term *tumour* is understood a swelling possessing some solidity. Tumours in general are considered to be formed by the effusion of coagulating lymph in the part, either accidentally, or in consequence of disease, which is afterwards converted into a living part, by the growth of the adjacent vessels and nerves into it. The observations of the late Mr. Abernethy on this subject, in his publications, are very valuable, and he thought that the manner in which tumours are formed is best illustrated by those which hang pendulous from the membranous lining of different cavities. He used to advert to an example noticed by John Hunter, in which, on the cavity of the abdomen being opened, there appeared lying upon the lining membrane, a small portion of red blood recently coagulated. This, on examination, was found to be connected with the surface upon which it had been deposited, by means of an attachment, half an inch long, and this neck had been formed before the coagulum had lost its red colour. Mr. Abernethy used to say, that if vessels had shot through the slender neck, and organized the clot of blood, this would then have become a living part: it might have grown to an indefinite magnitude, and its nature and progress would probably have depended on the organization which it had assumed. He mentions his possession of a pendulous tumour, found growing from the membrane lining the abdomen, and which was undoubtedly formed in the same manner as the tumour above noticed, that is, by vessels shooting into a piece of extravasated blood, or lymph, and rendering it a living organized substance. When the deposited substance has its attachment by a single thread, all its supply of blood, whereby it grows, must proceed through that part; but in other cases, that is, where its connection with the surrounding structure is more or less broad and extensive, the vessels shoot into it irregularly at various parts of its surface.

Thus, an unorganized concrete becomes a living tumour, which has at first no perceptible peculiarity as to its nature; and it is remarkable, that although its supply of blood is furnished by the vessels of the surrounding parts, it seems to live and grow by its own independent powers, while its future structure seems to depend on the operation of its own vessels. Thus in one case we may witness a sarcomatous swelling, while in other cases we see an encysted or steatomatous, an osseous or a cartilaginous tumour.* Now and then we observe, that the structure of a tumour is like that of the parts near which it grows; for example, such as are pendulous in joints, are cartilaginous or bony, and fatty swellings frequently form in the midst of fatty substance, as in the female breast; but the resemblance of the structure of a tumour to that of the neighbouring parts, is not generally observable.

I have considered at some length, in my *Treatise on the Diseases of Females*, the subject of tumours in the breast and womb.

One of the best treatises ever published in this country *on Tumours*, is that by the late Mr. Abernethy. The tumours most frequently met with, are the *common vascular*, the *fatty*, the *pancreatic*, and the *schirrous* or *cancerous*. All these vary much in size, the two first remarkably so. An enormous mass of the kind first named, weighing forty-four pounds, was removed by an operation some years since at Edinburgh, (see *Edinburgh Medical and Surgical Journal, No.* 77); and Sir Astley Cooper not long since removed a fatty swelling, which weighed, independently of the blood in it, thirty-seven pounds ten ounces, and was situated in the abdomen of a man, aged fifty-seven, (see *Medico-Chirurgical Transactions, vol.* ii. *p.* 440.)

* Dr. Baron, of Gloucester, has published some observations in contradiction to the view taken above, in which he expresses his belief that all tumours wherever situated, and of whatever substance composed, were in their origin small vesicular bodies, with fluid contents, called *hydatids*, and he says, (*Observ. on Tuberculated Accretions of Serous Membranes, p.* 215.) "On the size, relative position, and structure of the tubercles, which are so formed, depend the characters of many of the most formidable disorganizations, to which the human body is exposed." But the doctrine laid down above on this subject appears to me the only probable one hitherto taught, and it is received as such by far the most numerous part of the profession. Undoubtedly there are tumours occasionally to be met with of a vesicular character, that is, formed of hydatids, and although we would not say that no other kind of tumour ever seems to be so constituted in the commencement, yet it is rare, and Dr. Baron appears to have fallen into the error of mistaking the exception for the rule.

The late Dr. Joseph Adams, of Hatton Garden, referred the origin of cancer to the living state, growth, and multiplication of the hydatid.—(*Observ. on the Cancerous Breast, p.* 77.) The present author, when a student, attended his Lectures on the Practice of Physic, and, notwithstanding his partiality for his lecturer, has often been compelled to discard his visionary sentiments, especially on consideration in after life. Another of the visionary principles he was wont to insist on, is—*Where there is pain there is inflammation, and you must act accordingly*,—a sentiment certainly not more incorrect than that which refers the formation of tumours to the production and accretion of hydatids.

TREATMENT. These are diseases that seldom admit of removal but by the knife of the surgeon, and therefore I have little to say here on the subject of treatment, beyond recommending the employment of the most powerful alterative medicines, in all cases in which it is probable or possible that such means may be beneficial. The most powerful alterative medicines here are sarsaparilla, the alkaline solution, *liquor potassæ*, iodine, and mild mercurial combinations.

I have seen most satisfactory changes wrought by sarsaparilla, and in illustration of its admirable effects in a severe local complaint dependent on a derangement of the general health, the following case will be read with interest:—

"A lady, about thirty years of age, had a tumour arising from the cavity of the left nostril, of so large a size as to enlarge the nose considerably. It was firm to the touch, painful, and attended with throbbing, and with head-ache. A large consultation, consisting of Mr. Cline, Mr. Cooper, Mr. Abernethy, and the author, was summoned, and it was determined that the tumour should be touched with *kali purum* frequently, and that small quantities of blue pill should be given occasionally, great attention being paid to the digestive organs. This plan was pursued for some time. The part of the tumour to which the *kali purum* was applied, was destroyed by it, but the old surface regenerated a new tumour. Another consultation was held; the plan was altered, and, notwithstanding, the disease increased, and the patient's health gave way. She was then desired to take powder of sarsaparilla, in the quantity of an ounce daily" (a very large quantity). "In less than a month the tumour lessened, it was eventually absorbed, an adhesion formed between the surfaces of the ulcerated nostril, leaving a small opening only; and no return of the complaint has taken place, although it is now two years since the commencement of the plan; during nearly the whole of which time the lady has continued to take the remedy in smaller doses, habit having so far familiarized her to it that she has no dislike to it." *Sir Charles M. Clarke on the Diseases of Women, part* 1. *second edit. p.* 238.

With the view of affording encouragement to those who suffer severely from tumours of a certain description, in which iodine might be usefully employed, I will now add an extract from some remarks of Sir. B. Brodie on the use of that substance, (see *Johnson's Medico-Chirurgical Review, No.* 24, *p.* 429-30):—

"I have employed iodine as an internal medicine in a great number of cases of morbid growth, without any manifest effect arising from its exhibition. In two cases, however, and in two only, it was productive of the greatest benefit, effecting that which I could scarcely have supposed that any medicine was able to accomplish.

"In one of these cases, which I attended with Mr. Pennington, the patient laboured under a tumour on one side of the tongue, and imbedded in its substance, of about the size of a nutmeg, of an irregular form, hard to the touch, and having a well defined margin. The disease had existed between one and two years, gradually making progress; and it had resisted the internal use of arsenic, as well as a course of sarsaparilla, combined with oxymuriate of mercury. As the surface of the

tongue was furred, and there were some other symptoms which seemed to indicate a deranged state of the digestive organs, we prescribed, in the first place, the pilula hydrargyri, with a gentle aperient, and a light bitter with soda. Under this treatment the tongue became clean, but there was no perceptible alteration in the local disease. We then administered the tincture of iodine three times daily in moderate doses, gradually increased. In a fortnight the tumour was evidently smaller, and at the expiration of about eight weeks it had nearly disappeared. The patient was sent into the country, being directed to continue the use of the iodine for some time longer. This was upwards of four years ago, and I have not seen the patient since; but I have been informed that the cure is complete.

"The second case was that of a man who was admitted into St. George's Hospital on account of a tumour, situated on one side a little below the axilla. It was of the size of a small orange, unattended by pain, and bearing no other marks of inflammation, and quite moveable beneath the skin. Having removed it by the knife, I found, on making a section of the tumour, that it was composed of a brown solid substance, of a firmer consistence, and to all appearance more highly organized than fungus hæmatodes, and of an uniform structure throughout, except that externally it was covered by a thin membranous cyst closely adhering to it. Sometime afterwards the same man applied at the hospital a second time, having two tumours on the neck, each of the size of a double walnut. These bore no resemblance to the common enlarged glands which occur in this situation, and so exactly resembled that which had been removed from the side, that no one entertained a doubt as to their being exactly of the same nature.

"Conceiving that there were some obvious objections to a second operation for the removal of a disease, so manifestly depending on a constitutional cause, and knowing nothing better to be done, I prescribed the tincture of iodine to be taken internally. Under this course of treatment, which was continued for several weeks, the tumours gradually diminished in size, and ultimately disappeared. I have heard nothing of the patient since; but as I told him that he should be received into the hospital again whenever he applied for that purpose, I think that in all probability he has had no return of his complaint.

"I have no right to say, that in these cases the tumours were of a malignant nature; at any rate, they were not malignant tumours of the worst kind. I have, however, exhibited the tincture of iodine in many cases of truly malignant disease, and in a few instances, as it appeared, not without some temporary advantage. For example, I was consulted concerning a lady who was supposed to labour under a tumour of the breast. I found, however, on examination, that the breast itself was in a healthy state; and that in this, as in some other cases which have fallen under my observation, the apparent enlargement of the breast was the consequence of its being elevated by a tumour beneath it. The tincture of iodine was given internally, and under its use the tumour became so much reduced in size, that I had the credit with the patient and her friends of having cured an obstinate disease. The amendment, however, was of short duration. Soon after discontinuance of the medicine, the tumour began again to increase in size; and the iodine, which was a second time administered, had now no dominion over it. The patient ultimately died; and on inspecting the body, it was ascertained that there was a medullary or fungus tumour, which had its origin in one of the ribs below the breast and pectoral muscles. The same disease existed also in other parts of the body."

OF TYPHOUS FEVER.

Typhous fever is a continued fever, which is characterized by being a contagious disease, by the temperature of the body being, for the most part, little raised, the pulse small, weak, and frequent, the urine little changed, the mind much disturbed, and the strength greatly reduced. It is a fever which usually runs a lengthened course, generally not less than one-and-twenty days, and which is attended with evident symptoms of depressed nervous power, and great depravation as well as diminution of the secretions. See page 404.

The *symptoms* of typhous fever vary considerably in their first appearance, and in their progress and severity, in different instances, owing to the difference of cause, constitution, age, situation, or other circumstances; but, in the generality of cases, the following are the chief symptoms, and the order in which they arise. There is an uneasy and peculiar sensation in the stomach, nausea, and giddiness; languor, lassitude, anxiety about the pit of the stomach, and region of the heart, alternate heats and chills, or a sense of creeping in different parts of the body; confusion, uneasiness, and pain in the head, redness and dulness about the eyes, dejection of mind, tremulous motion of the lips and tongue, and restlessness; short anxious breathing, acute pains in the back and other parts of the body, much thirst, nausea, vertigo, great prostration of strength, clammy, profuse perspiration, sometimes preceded by a hot dry skin; stupor, or low muttering delirium. Sometimes the pulse is not much affected in the beginning, but as the disease advances, it usually becomes small, weak, frequent, and often irregular; and the tongue at first only covered with a little white mucus, afterwards becomes coated with a thick, brown or black, dry, and firm fur.

Such are the most prominent symptoms of *mild typhus*, or what is sometimes called *low nervous fever*. If it proceed to a fatal termination, the symptoms of debility increase, and become extreme; the patient lies prostrate on his back, with extended arms, and insensibly glides down to the bottom of the bed; there is a continued state of insensibility; a low muttering delirium; a peculiar yet indescribable expression of anguish in the countenance; twitching of the tendons; picking at the bed-clothes; involuntary evacuations, and hiccup.

If the disease appear under the form of the severer or *malignant typhus*, frequently called *putrid fever*, its attack is more sudden and violent, its progress more rapid, and all the symptoms of debility and putridity appear earlier, and in an aggra-

vated form. Here the rigours are extremely severe,—the heat of the skin often peculiarly acrid and burning, (see page 489),—the head-ache intensely painful,—the expression of anguish indescribably acute,—the pulse tense, hard, quick, and fluttering. The prostration of strength appears early, and is extreme; the fever sensibly increases every evening; the delirium is high and ferocious; the complexion is brownish, or of a slight pink hue; the eyes are heavy and much inflamed; the breath hot and offensive; the tongue dry, dark, livid, or black; and the teeth and lips affected with brown sordes; vomiting of black, bilious matter is present; and the stools are blackish and very fetid. In the advanced period of putrid fever, cold clammy sweats occur, with red spots, called petechiæ, under the skin, bleeding from various parts of the body, and a black gangrenous thrush appears about the mouth and throat; the pulse sinks and intermits, the extremities grow cold, and death ensues.

A moderate degree of deafness; the respiration returning to a natural state; moderate looseness at an early period; the urine natural in quantity, and depositing a red sediment; a thin and universal sweat, not profuse; the pulse becoming fuller and slower; light-coloured thrush, particularly if accompanied with an increased secretion of mucus from the fauces, or of saliva; and swelling and suppuration of the glands of the neck, are favorable symptoms. If the breathing and swallowing be free, the prognostic is often favorable, although the other symptoms appear alarming.

The following are very unfavorable appearances, viz. a depravation of sight; the eyes appearing as if covered with a film, especially if blood flow from them; the voice being very much affected in an unnatural manner; a thin, watery looseness at a late period; the urine being pale and limpid, or appearing brown, and depositing a matter like coffee grounds, or being suppressed without pain or distention of the bladder; no complaint of thirst, when the mouth and fauces are very dry; extreme and increasing debility. All bleedings, at an advanced period of the disease, are unfavorable, especially from the pores of the skin; and the danger of petechiæ, (little red points, appearing under the skin,) is in proportion to the darkness of their colour. See FEVER, page 400.

Whatever debilitates the living powers of the human system, may become a *cause* of typhous fever; and among the most frequent and powerful sources are, poor living,—a confined stagnant atmosphere,—grief, and other depressing passions of the mind,—sedentary living,—intemperance,—excessive indulgence in the use of intoxicating liquors,—profuse evacuations, and exposure to cold, united with moisture. Any of the ordi-

nary causes of fever may be the cause of typhus, if the season of the year, the state of the atmosphere, or the constitution of the patient, disposes to this form of the disease.

It is often propagated by contagion, that is, by the effluvium issuing from a living body labouring under the disease; and when a patient afflicted with typhus is confined in a damp, close, and stagnant atmosphere, deprived of free ventilation, and exposed to the noxious exhalations of accumulated dirt and filth, he is in a condition to communicate the disease in its worst form, and it is from such a source that the severer or putrid form of typhus commonly arises. Indeed, this fever frequently arises in crowded places, among persons previously healthy, when due attention has not been paid to ventilation; and in this way it often appears in jails, transport ships, hospitals, and the crowded and filthy habitations of the poor.

Frequently typhus is only a sequel of inflammatory fever.

Typhus is *distinguished* from inflammatory fever by the numerous and well marked symptoms of debility present in the former,—by the weak and enervated constitution of the patient,—the brownish appearance of the skin,—the smallness of the pulse,—the brown fur on the tongue, and the early and great disturbance of the mind.

When it occurs as a termination of inflammatory fever, it is known by the symptoms of debility and putrescency above described, supervening those of high inflammatory action, as detailed at page 489.

Treatment. In the treatment of this fever, we must ever be guided, in some measure, by the nature of the symptoms, the age of the patient, his habits, and constitution; but as it is in its later stages a disease of debility, after the general excitement and pain have been removed by blood-letting, a mild tonic plan of treatment is the most proper and successful, and the means that have been found of the greatest service, are free ventilation and fumigation, the affusion of cold and tepid water, and the exhibition of mineral acids, bark, wine, and opium.

The first points to be attended to in the management of patients afflicted with typhus, whether it appear under the milder form of a low nervous fever, or the more severe and aggravated character of a putrid, jail or hospital fever, are free and sufficient ventilation and fumigation. These means are too often neglected, but are universally called for, and will frequently prove of more service than any other cordial. The windows and doors must be freely and constantly opened, and the apartments fumigated with the nitrous acid vapour, in the manner described under putrid sore throat, or with, what is still

better, the chloride of lime (199.) It should never be forgotten, that a contagious atmosphere is injurious to the patient, as well as dangerous to the attendants, and, therefore, every proper means of purifying the air surrounding him must be resorted to, and steadily persevered in. The bed-clothes covering him should be few and light; his chamber should be freed from all unnecessary furniture, and attendants; his sheets and body-linen should be frequently changed, and instantly removed from the room; as should also his stools and urine. He must also be kept quiet, and every mental exertion avoided.

When the patient has been recently attacked, it is generally advisable to commence by giving him the emetic draught, No. 29, page 103, which is often of great service in clearing the stomach, and relaxing the skin, and should the first fail of a good effect, a second will sometimes succeed. But it is only in the early periods of the disease, and before any severe symptoms of debility appear, that emetics are proper. After this, the bowels should be cleared by administering the mild aperient, No. 27, page 103, or one or two of the pills, No. 97, and one of these may afterwards be resorted to occasionally, so as to preserve these organs free from any accumulation. Purging must be avoided in all cases, unless the disease is in its first stage, and the inflammatory symptoms run high; then either the powder, No. 121, page 125, or the draught, No. 27, may be administered every morning, and sometimes with considerable advantage; but when debility has come on, and especially if it be very great, the mildest aperients only should be used every other day, so as to prevent costiveness.

Blood-letting has been of late years strongly advised in typhous fever, and at the commencement of the attack it is often a remedy of singular value. When, on its first appearance, the face is flushed, the head or chest, or any other part painful, the pulse full and strong, and the general heat considerable, a moderate and immediate use of the lancet will be necessary, and prove of much advantage in moderating the inordinate action in the system, especially in young and vigorous patients, and where the pulse is hard as well as strong, and it is not contraindicated by the depressive nature of the reigning epidemic. Congestion or inflammation are very apt to take place in different organs, particularly in the head, lungs, liver, and bowels, when blood must be abstracted locally by means of leeches or cupping, as well as generally by the employment of the lancet, the quantity of blood drawn being in proportion to the age of the patient, the stage of the fever, and the urgency of the pain, and other oppressive symptoms. But the propriety of bleeding can be best determined by a medical man, and it is highly

necessary that an able practitioner should be called in without the least delay, in all cases of fever. See the hints at pages 406-7.

The affusion of cold water is a remedy of great power in the early periods of this fever. The sooner it is employed the better, if all chilliness has disappeared, and the skin is hot and dry. It must never be employed when any degree of perspiration is present, and rarely after the first three or four days from the commencement of the fever. If, therefore, on the first, second, or early on the third day, the skin be unusually hot and dry, the patient should be stripped naked, supported on a stool in a low wide tub, and have two or three gallons of cold water briskly thrown over him, from the head downwards. It may be repeated twice a day, at noon, and in the evening about seven or eight o'clock; and so great is the value of this remedy, that, in most instances, it proves extremely grateful and refreshing to the patient, directly diminishing the general heat of the body, and the frequency of the pulse, and disposing to sleep, while it mitigates the subsequent violence of the symptoms; and sometimes it suddenly cuts short the fever. But after the third day, the cold affusion would be improper and dangerous, and we must then substitute cold ablution, which, although it fails to cut short the progress of the disease, is often attended with manifest advantage, since it cools and refreshes the patient, lowers the pulse, and tends to alleviate all the symptoms of inordinate excitement without endangering any subsequent debility. Consequently, from the third to the eighth day, the patient may be washed all over quickly with a sponge dipped in cold water, and immediately rubbed dry after it. This may be repeated twice daily, at those times when the skin is most affected with extreme heat and dryness. From the eighth to the thirteenth day the washing should be performed with lukewarm water, or lukewarm vinegar and water, which at that period answers better than cold water. After the thirteenth day, this remedy is of little or no service.

In most cases, typhus calls for a recourse to tonics, if the disease becomes protracted, and they are indicated at any stage when real debility is present, and, in general, the greater the debility the more necessary they are. But it must be constantly recollected, that it is not by pouring in as much wine and bark as the patient will take, that we derive the greatest advantage which this class of remedies is capable of affording. Very serious, and even fatal consequences have arisen from proceeding on this erroneous notion. For if, in the use of these and other tonics, we very sensibly increase the general excitement, by the largeness or frequency of our doses, a degree of

debility follows, corresponding for the most part with the undue excitement previously raised, and by persisting in the practice, so great a measure of weakness and exhaustion is at last induced, that the pulse grows more frequent and feeble, till it ceases altogether. The excitability, or vital energy of the body, is here much reduced, and it is only by a cautious mode of proceeding in the use of tonics, that we are able to increase it, or to prevent its exhaustion. Therefore, whatever kind of tonic is employed, the patient should begin with small doses, and if he gain an advantage from such quantities, he should, for the most part, be satisfied, and follow up this advantage by continuing the same dose. This is more especially necessary in the commencement of the fever, and when the symptoms of debility are not urgent.

In the early periods of typhus, I prefer the administration of muriatic acid to that of any other kind of tonic, because it allays the heat, and tranquillizes the restlessness, at the same time that it supports the strength of the patient, and, therefore, may invariably be given much earlier than either bark or wine. For in the earlier stages of this fever, there is often great heat and dryness of the skin, much thirst, and other symptoms of general excitement, which the use of bark or wine will seldom fail to increase, especially if given in large doses, and it is, consequently, necessary in the generality of instances to defer their employment till these symptoms have been relieved. Besides, this acid is a remedy peculiarly well adapted to domestic practice in this disease, since it is more manageable than most other tonics, and may be used by unprofessional persons with more prospect of advantage, and less risk of injury, than they can hope to obtain from giving either bark or wine. Indeed, under all circumstances, and in every stage of putrid fever, it is a remedy superior in efficacy to bark, and should be given as soon as the symptoms of debility come on. Ten drops of this acid may be mixed with three or four drops of laudanum, and an ounce and a half of infusion of chamomile flowers, or of columba, and given as a draught, every four or five hours; and the dose of the acid may be gradually increased to twelve and sixteen drops. At the same time, fifteen or twenty grains of camphor, made into a bolus with conserve of roses, should be given every night, to assist in calming the patient, and in disposing to sleep. Camphor has been highly praised by some eminent authors, as a cordial in this fever, and when a great degree of restlessness and debility comes on early, it will be a very suitable anodyne and tonic, and should seldom be neglected.

Where there are no symptoms of general excitement existing to contraindicate the use of bark, the decoction of that substance may be employed as a vehicle for the muriatic acid above prescribed, instead of the chamomile infusion, or this acid may be given in combination with bark, according to the formula, No. 84, at page 116. The best form, however, of giving bark is the sulphate of quinine; one or two grains of this article being made into a draught, with ten or twelve drops of muriatic acid, two or three drops of laudanum, and an ounce and a half of water, and repeated every four hours.

If the symptoms of debility are considerable, a little wine must be given in conjunction with the tonic medicine employed, and the greater the debility the more clearly is this cordial indicated. But small quantities only should be given in the beginning, they being gradually increased in proportion as the living power flags, and according to the circumstances of the case. If by giving a small quantity of wine, for example, a glass or two of old Port or Madeira three or four times in twenty-four hours, we find that we gain an advantage, the symptoms of debility being permanently relieved without its occasioning any great degree of heat and general excitement, we ought in general to be satisfied, and not to augment the dose. And when its administration is not attended with this desirable effect, caution must be exercised in increasing the quantity. If it quickly, and to any considerable degree, raise the pulse, we may be assured that we are giving too much. If the symptoms of sinking and debility return, soon after the cordial effects of each dose, the proper practice is, not to increase the dose, but to lessen it, and give it more frequently. Those cases of typhus which are accompanied with petechiæ, or small red spots under the skin, and with a strong tendency to gangrene, call most for the use of wine; and those in which the skin is soft and inclined to be damp bear it best. The tongue being tremulous, moist, or not very dry, and the delirium consisting of low muttering incoherence, are symptoms which afford additional reasons to hope that it will prove useful. It may be given also more freely, and with less risk, to old persons, and weakly habits, to those accustomed to the free use of fermented liquors, and those inhabiting low, crowded situations, than in the opposite circumstances. Typhous fever occurring in autumn, shews a greater tendency to debility than when it appears in spring, and, therefore, calls for more wine. See also what is said of the use of wine in typhus, at page 92.

In addition to the cordials and tonics just prescribed, opium, yeast, sweet-wort, cayenne pepper, and other stimulants and

antiseptics, have been strongly recommended by various eminent practitioners, and are, no doubt, sometimes of great service.

Opium is sometimes of no small use in tranquillizing the restlessness, and supporting the powers of the system, in the advanced stages of putrid fever. It is best given in conjunction with camphor. If, therefore, great inquietude occur at an advanced period of the disease, a grain of opium, and four or five grains of camphor, may be made into a pill, and given at bed-time, or twice a day. When the skin is hot and dry, a grain or two of James's powder should be combined with each pill. Dr. Cullen used to say, that in the latter stages of jail or hospital fever, when there is much delirium, catching of the tendons, and convulsive twitchings of the limbs, he found opium the best remedy, and that it should then be given in free doses, as one or two grains, combined with five or six grains of camphor, two, three, or four times in the twenty-four hours. In such cases, he condemns bark. For the relief of tremors, startings, spasms, delirium, and other symptoms of great irritation, cobweb is frequently found of remarkable service. It will sometimes calm the patient more effectually than opium, wine, or camphor, and may be given in the dose of eight or ten grains, which may be repeated to the second time in the space of twenty-fours, if necessary.

Yeast was at one time in high repute as an antiseptic in this disease, and is worthy of some confidence. It is well suited to domestic practice, since it is a simple remedy, and easily procured. It is said, that a son of the Earl of Essex was given over by Dr. John Willis, in typhous fever, and afterwards restored by sponging the body with vinegar, and using yeast internally by mouth and clysters. One of the best modes of giving this article, is in an infusion of malt,—a combination from which Dr. Haygarth, of Chester, says, that he has derived great advantage in the treatment of putrid fever. A tea-spoonful of yeast is mixed with a pint of strong wort, and the vessel then covered close, and placed near a fire. In less than an hour, it is covered with a white cap of yeast, and should be drank in that state. One or two pints of this mixture must be taken in divided doses, during the day. If good wort cannot be got from the brewer, the patient's friends may make it by pouring a little more than two pints of hot water on two pints of malt, which after it has stood close covered for two hours, should be strained off for use. The water should not be poured on the malt boiling, but be allowed to cool for a few minutes.*

* I am glad to see that recent testimonies are much in favor of the efficacy of yeast in typhous fever. "Dr. Stokes (of Dublin,) who seems to have used it more exten-

In low nervous fever, that is, the milder sort of typhus, blisters to the nape of the neck, or between the shoulders, will often afford considerable relief from head-ache, and delirium. The kind of delirium most benefited by these means is, that accompanied by a suffused redness of the eyes; and whenever they are employed, it is seldom proper to allow more than one to be applied to the body at one time. Blisters are rarely advisable in the severer or malignant typhus, on account of the existing tendency to gangrene, which they are very apt to increase.

When the extremities become cold, bottles of hot water, or a mustard poultice, may be applied to the feet. A mild looseness should rarely be interfered with, but if it grow excessive, three or four grains of the compound powder of ipecacuanha may be made into a pill, and given occasionally; or a grain or two of this powder may be mixed with half a drachm of tormentil powder, and administered after every liquid stool. The mildest astringents should be tried first. Should bleeding arise during the course of the fever, the best way of checking it is, by the free use of vegetable and mineral acids, and especially the oxygenated muriatic acid, of which twenty drops may be taken in cold water, every second or third hour. If the bleeding become alarming, it might be proper to give a grain of superacetate of lead, and a grain of opium, made into a pill, every hour, or every second hour, till the hæmorrhage is checked.

The food, in all cases of typhus, should be nutritious, but the stomach must never be overloaded. It should be easy of digestion, and given frequently, and in small quantity. The best kinds of food are, fresh fruit, farinaceous vegetables, as sago, panada, decoction of barley, grits, &c. jellies and bread. Fresh acid, and sub-acid fruits, as currants, gooseberries, grapes,

sively than any other physician of the present day, speaks highly of its efficacy, after a trial of its powers for upwards of thirty years, both in public and private practice. He has administered it in cases where purple extremities or gangrenous sloughing took place, accompanied with symptoms of inflammation. The result of his experience is, that barm or yeast is well suited to every stage of typhous fever in which it can be borne by the stomach. It is in general easily taken alone, or with any medicine that it may be deemed advisable to join with it; but in the worst forms of typhous fever, when it is most needed, it not only is seldom rejected by the stomach, when any other medicine can be retained, but the patient, in such cases, often expresses a liking for it. According to this author, yeast, being moderately laxative, often supersedes the necessity of repeated doses of purgatives; but, if required, an aperient tincture may be added to it. Should, however, the bowels be purged, a few drops of tincture of opium should be added occasionally. He ascribes its efficacy to its power of correcting the morbid contents of the alimentary canal, and consequently the symptoms of putrescence, and asserts that in his idea, petechiæ and a black loaded tongue will be found more effectually remedied by it than by other medicine. In adverting to the objection to this remedy, that it may be likely, by promoting fermentation, to increase the tendency to tympanitic distension, Dr. Stokes states, that in some of the most obstinate cases of tympanitis, clysters of yeast and assofœtida have proved the most efficacious remedies."—*Cyclopædia of Practical Medicine, vol.* ii. *p.* 210, 1833.

oranges, &c. are very refreshing to patients suffering under this fever, and may be freely taken at all times. The liquid food given, should, if possible, be always mixed with some portion of that which is solid, and especially with bread; and when the debility is considerable, the stomach ought not to be permitted to remain long empty. No kind of animal food, or even broth, is proper while a tendency to exacerbation or feverish increase continues. In the worst cases of typhus, the powers of digestion are wholly suspended, and as the state of the stomach does not then admit of any kind of food, our great dependence must be upon the use of wine as an article of diet, and it must be given frequently, but in small quantities.

The patient should be allowed to quench his thirst, by drinking as freely as he pleases of mild diluting drinks, as barley-water, tamarind tea, lemonade, &c. Soda-water, highly acidulated, is, for the most part, very proper; and water saturated with carbonic acid gas is sometimes of great value when taken as common drink, especially in malignant typhus.

OF ULCERS.

An ulcer is a breach of continuity in any of the soft parts of the body, attended with a secretion of matter, or some kind of discharge.

Ulcers are of different kinds, varying in their appearance, and the symptoms, whether local or constitutional, by which they are accompanied; and, in order to treat them with success, it is necessary to attend to these symptoms and appearances. Ulcers are chiefly of the following kind, viz. the HEALTHY, the IRRITABLE, the INDOLENT, the INFLAMED, the SLOUGHING or GANGRENOUS, and the SINUOUS.

The HEALTHY ULCER has a florid appearance; the little red eminences, called granulations, are small, and pointed at the top; the surface of the sore is even with the surrounding skin, or only a little above it; it secretes a bland, whitish, opaque matter; and its edges are thin, and even with the surface. Here the healing process goes gradually on until a cure is effected; and all that is necessary to be done, in the generality of cases, is, to avoid every source of irritation, and to apply a simple dressing to the sore, and over that a bandage comfortably tight. The best simple dressings are, the saturnine cerate, No. 94, or that, No. 95, page 119; and the bandage may be formed of a long strip of linen, or of the adhesive plaster, sold by all druggists. The ointment chosen is merely to be spread thinly on a linen rag, or lint, and thus applied. If the ulcer should be large, and especially if it has followed an abscess, it will gene-

rally be advisable for the patient to rest, and to keep the part supported in an horizontal position, and to apply a bread and water poultice (only moderately warm,) for the first few days, until the surface of the sore looks clean and red, and has risen even with the surrounding skin, when the poultice should be laid aside for the simple dressing and bandage.

It is not unusual for proud flesh to appear in these ulcers; when it does, a small piece of lint should be laid in the middle of the sore, and the surrounding part close to the edges touched every day with lunar caustic, strips of adhesive plaster being afterwards applied rather tightly, so as to keep the luxuriant growth down.

The IRRITABLE ULCER is exquisitely tender and painful, although it may be but slightly inflamed; its surface is unequal, being in some part high, in others very low, and without the florid appearance of a healthy ulcer; and the discharge is either matter mixed with blood, or of a thin irritating nature. Often the margin of the surrounding skin is jagged and sharp. Lukewarm (not hot) fomentations of poppy-heads and mallow-leaves, of fox-glove, or of hemlock, generally agree very well with irritable ulcers; one of these may be used once or twice a day, and in the intermediate time the ulcer should be dressed with an ointment, spread on lint, composed of half an ounce of spermaceti ointment, an equal quantity of mild mercurial ointment, and a drachm of powdered opium, mixed together. Medicines calculated to allay irritation, and improve the condition of the general health, must be taken internally at the same time, and the best are calomel and opium, with the powder or compound decoction of sarsaparilla. A grain of calomel and a grain or half a grain of opium may be made into a pill, with a little conserve of roses, and taken every night, or night and morning; and four ounces of compound decoction of sarsaparilla, or half a drachm of the powder, twice or thrice a day. The calomel should not affect the constitution; if it does, it may be changed for two grains of blue pill, or mercury may be wholly laid aside, and five or eight grains of best extract of hemlock (see page 108) taken instead, twice or thrice a day, with the sarsaparilla.

This kind of ulcer is frequently very difficult to manage, and often require us to change, and vary our remedies. What agrees best with the majority of cases, will sometimes disagree in individual instances. If, therefore, it be found necessary to use other means than those just recommended, the nitric acid lotion, in the proportion of fifty drops of the acid to a quart of water, will sometimes prove very beneficial; to be used twice a day instead of the fomentations and ointment, above prescribed. Or a piece of lint dipped in the tincture of opium, or

in a solution of lunar caustic, in the proportion of half a drachm of the caustic to an ounce of distilled water, may be laid over the ulcer, and covered with a pledget of lint spread with spermaceti ointment. Bandages do not generally agree with irritable ulcers. Whatever applications are made to the sore, internal medicines must not be neglected, since the constitution is, in these cases, almost invariably in an irritable, unhealthy state. Change of air is advisable, and attention to diet must not be forgotten.

The INDOLENT ULCER is characterized by the glassy and semi-transparent appearance of the surface, in which there is little or no attempt towards healing, the sore remaining nearly in the same state for a considerable time. There is here an evident deficiency of action in the vessels of the part, and a want of energy also, for the most part, in the general system. The languid indolent ulcer requires stimulating applications locally, in conjunction with a nutritious diet and strengthening medicines. It may be dressed, once or twice a day, with the ointment of nitric oxide of mercury, or with that marked No. 89, or 92, page 117. Sometimes a stimulating lotion will answer better, as the solution of lunar caustic above mentioned, or a solution made by mixing together eight grains of oxymuriate of quicksilver and six ounces of lime-water, either of which may be applied twice daily. The part must be constantly bandaged after being dressed, and the patient should take gentle exercise. As a strengthening medicine, the pills, No. 102, 103, page 121, or No. 115, may be taken at the same time.

Generally speaking, scrophulous ulcers are of an indolent nature. A very good plan of treating those ulcers consists in applying to them, once or twice a day, a poultice composed of sea-weed, or sea-tang, bruised, and taking, at the same time, thrice a day, a grain or two of the best sulphate of quinine, made into a pill, with three grains of extract of hemlock prepared in vacuo. The patient should, if possible, have the benefit also of a nutritious diet, and pure air. If the sea-weed cannot be got, dress the ulcers, twice a day, with the cerate of carbonate of ammonia, made by mixing together a drachm of this salt and an ounce of simple cerate; or wash them as frequently with a lotion formed of equal quantities of tincture of myrrh and lime-water.

The INFLAMED ULCER is accompanied with the appearances of inflammation on the surface, and in the skin and surrounding parts. The discharge is of a thin bloody nature; the surface is often covered with a brown incrustation, and sometimes there is a disposition in the sore to slough. The best manner of treating these ulcers is, to foment them with poppy-heads, mal-

lows, &c. twice a day, following the fomentation each time by the application of a warm bread and water, or linseed meal poultice; to observe a state of perfect rest; and to keep the bowels free, by using the mixture, No. 73, or 74, every morning, or the pills, No. 97, or 100, page 120, every night. If the patient be a strong person, or the inflammation severe, he may take two of the pills, No. 97, at night, and four table-spoonfuls of the mixture, No. 74, on the following morning, and repeat the same every day, until the existing irritation is removed; but, in ordinary cases, the use of one of these opening medicines will suffice. Should the surrounding parts be much inflamed, it will sometimes be advisable to apply four or five leeches near them, but fomentations and poultices will, in general, be sufficient. The diet should be very mild, and small in quantity. When by these means the parts have been brought into a healthy state, the simple ointment recommended for the healthy ulcer should be resorted to.

Sloughing and Gangrenous Ulcers occur mostly in intemperate and debilitated subjects. Their surface is free from any discharge; the surrounding edges are of a livid appearance, with small blistered spots on them; and the patient suffers from a good deal of irritative fever. Sometimes the greater part of the ulcer looks livid or black. The treatment is precisely the same as we have recommended for Mortification. The patient should cover the part with a poultice of Port wine and linseed meal, or of stale beer grounds and meal, renewing it every eight or ten hours; he should take the draught of carbonate of ammonia, laudanum, and camphor mixture, as advised at page 556, every four hours; and make use of a generous diet. Wine and porter may be allowed, and even brandy, if the patient has been much used to it. The nitric acid lotion, (forty or fifty drops of the acid to a quart of water), is also an excellent application to the ulcer. It is highly praised by Sir Astley Cooper, and may be applied, if required, instead of the above poultice, twice or thrice a day, by means of a camel's hair pencil, or lint.

The Sinuous Ulcer is one that occupies a sinus, or long narrow opening. When a sore extends to any considerable depth, so that the discharge has to travel through a channel before it arrives at the surface, such an ulceration is called sinuous. A fistula, for example, is a sinuous ulcer. The discharge from such ulcers is generally of a thin or otherwise unhealthy kind, the external opening is usually small, and there is a want of energy in the sore, which requires the use of stimulating applications. When, therefore, an ulcer of this description exists in any part (running under the skin and

muscles,) the patient should inject into it a little tincture of Spanish fly once or twice a day, and be careful in keeping the sides of the ulcer in contact, by compressing them, through their whole extent, by means of a compress of linen, sheet-lead, or any other convenient substance, bound down over the tract of the sore with a roller, or adhesive plaster. Two grains of corrosive sublimate, mixed with an ounce of distilled water, forms a solution which is injected into such ulcers with great advantage; and if the tincture of Spanish fly fail to be beneficial, it should be tried. A mild, nutritious diet is necessary, and, in general, the pill, No. 99, taken at night, with half a drachm of the powder of sarsaparilla and three grains of hemlock powder, twice or thrice a day, will improve the condition of the general health, and assist in curing the ulcer.

A Fistula in Ano is to be treated precisely in the same way; but a sinuous ulcer in this situation is rarely cured without an operation, which is very simple, and consists in dividing the intestine rectum from the verge of the anus, up as high as the top of the hollow in which the matter was formed; thereby laying the two cavities of the gut and abscess into one. By this means the hollow sinuous sore is converted into an open one, which contracts and heals from the bottom upwards, and a firm and permanent cure is thus obtained. Persons troubled with a fistula should be careful in regulating their bowels, by the use of some mild medicine, as No. 100, or the laxative electuary recommended for piles, at page 105, and should avoid every thing that irritates the lower bowels. Fistula in ano is so commonly dependent on a disordered condition of distant parts, that the operation seldom succeeds unless great attention be paid, at the same time, to improve the state of the constitution. The best means of invigorating the system I have pointed out above, and at pages 300, and 472. The quinine pills, No. 115, or the sarsaparilla decoction, given during the day, with the pill, No. 99, page 120, every night, and a mild nutritive diet, will be found of great service. Ward's paste (page 573) is also often given with much advantage in stimulating the fistulous ulcer to a healthy action. Now and then it happens, that a fistulous ulcer occurs near the anus in habits to which the accompanying discharge proves advantageous, and relieves complaints with which they were previously troubled; in this case, great judgment is necessary in determining on the propriety of an operation, and the advice of a skilful surgeon must be procured.

Sometimes women are afflicted with ulcers, which have a close connection with a partial or total stoppage of the natural monthly discharge. In such cases, the ulcer is often covered

with blood, especially about the period at which the menses should appear. The saturnine ointment, No. 94, may be applied to the ulcer, or it may be washed with a lotion composed of ten grains of calomel, and half a pint of lime water; and medicines must be given internally, to invigorate the constitution, and restore the natural discharge. The patient should take Dr. Griffiths's steel mixture, according to the directions at page 327, during the day, together with the pill, No. 98, or 99, page 120, every night. The tepid bath, at ninety-five degrees, will also be useful at the same time, and active friction over the loins and abdomen, with the flesh brush, should be daily resorted to. If this plan fail, the other means of re-establishing this flux, pointed out under RETENTION, or SUPPRESSION OF THE MENSES, should be employed.

Ulcers on the nose and face are sometimes of a very troublesome description, and difficult of cure. They now and then assume a malignant aspect. In this kind of ulcer, preparations of arsenic, and the carbonate, or oxyphosphate of iron, are the most efficacious applications. The ulcer may be dressed night and morning with the carbonate of iron, moistened with a little water, or with the following arsenical ointment, recommended by Sir Astley Cooper:

> Take of white oxyde of arsenic, flower of sulphur, of each, a drachm; spermaceti ointment, an ounce.—Mix them well together. Spread a sufficient quantity of it on lint, lay it on the ulcer, and leave it there for twenty-four hours; then remove it.

This single application will occasion a slough, which will come away, and the ulcer must then be dressed with a simple ointment, as No. 94, twice a day till it heals.

In ulcers that form on the fingers and toes, near or under a nail, the principal object of treatment is to obviate the irritation arising from the pressure of the nail, which as long as it is suffered to act on the ulcer, will prevent its healing, and will sometimes cause it to be very painful and troublesome. The nail should be pared down as thin as possible, without producing bleeding, then raised a little, and a small piece of lint introduced under it, so as to keep it from irritating the ulcer. The lint may be applied dry, or spread with Turner's cerate, or the ointment, No. 94, page 118. By this simple means, the ulcer will, in general, be effectually assisted in its attempts to heal. In a bad case of this description, that lately occurred to me, I found the application of a small blister, over the ulcer and nail, of much service, the above means being afterwards employed.

It is absolutely necessary, that in every case of obstinate or severe ulceration, the patient should endeavour to amend the

state of the general health, by means of a proper diet, recourse to pure air, and the use of alterative and strengthening medicines: for if an ulcer be not healthy, it will always be much assisted in healing by this attention, and when unusually obstinate and painful, will be quite intractable without it. In addition, therefore, to any local application made use of, the pill, No. 98, or 99, page 120, must be taken every night, and the decoction, or powder, or extract of sarsaparilla, twice or thrice a day, the bowels being kept regular by the occasional use of the pill, No. 100. The proper diet is described under INDIGESTION. Generally speaking, these are the best means of improving the state of the constitution; if they fail, the dandelion may be tried, or the pill No. 104, or the mixture No. 82, or 83, or the pills No. 102, 103, or 115, but the night pill just ordered should be continued at the same time, as it is seldom that any alterative can be found superior to the pills, No. 98, or 99. Sometimes the alkaline solution will be of great service as a tonic. Whenever severe pain attends, a pill composed of a grain of opium and a grain of calomel, will afford the most effectual relief.

Ulcers often follow ABSCESSES; and as I have omitted to notice the subject of abscesses in alphabetical order, shall make a few remarks in this place respecting their nature and treatment.

An ABSCESS is a tumour containing matter, produced by inflammation. When an inflammation in any part of the body terminates in the formation of an abscess, there is a remission of all the painful and inflammatory symptoms. The throbbing, severe pain present, goes off, and is succeeded by a dull, heavy pain; and the swelling becomes gradually more elevated above the surface of the surrounding skin, acquiring a softness to the feel, and showing a tendency to point in one particular place, in which situation a whitish or yellowish appearance is generally observable, instead of a deep red, which was previously apparent. If the process be suffered to go on without interruption, the skin becomes thinner every day, and at last gives way, when matter is discharged at the opening.

When an abscess is formed in a healthy person, the matter is thick, and of a white or yellowish white colour, and the application of warm poultices and fomentations is all that is requisite, in conjunction with a little cooling opening medicine. The fomentation should consist of a decoction of mallows, chamomile

flowers, poppy heads, or hemlock leaves; the poultice, of bread and water, or linseed meal. If the abscess has not burst, or been opened, both these must be used freely, particularly in the beginning of its formation, and while any inflammation continues; but after the discharge of matter, the fomentations may, for the most part, be laid aside, and a warm bread and water or linseed meal poultice be continued until all tenderness has left the part, and there is a free outlet for the discharge of matter, when the poultice may be discontinued, and a piece of dry lint applied to the opening, and over it a pledget, made by spreading a little spermaceti ointment on another piece of lint. To keep these simple dressings on, and to give support to the sides of the abscess, the part may be lightly bandaged with a linen roller, taking care that a free opening is left for the discharge of matter. If no particular pain be present, any common cooling physic will answer, as the draught, No. 27, or 28, page 103, which may be repeated every morning; but when the pain and general irritation are considerable, which sometimes is the case, especially if the abscess be large, or situated near a part of great importance, opium must be added to the purgative medicine, and the patient may have recourse to the following mixture:

Take of Epsom salt, an ounce; solution of acetate of ammonia, and water, of each, three ounces; laudanum, or solution of acetate of morphia, a drachm.—Mix, and take three or four table-spoonfuls thrice a day.

If the abscess has become ripe, and does not quickly burst spontaneously, it should be opened with the point of a lancet. When these tumours are of a favourable description, and come forward kindly, it is not usually a matter of much consequence whether they burst of themselves, or are opened by the lancet; but when they are situated under a thick expansion of skin, or of ligamentous or other unyielding substance, they must invariably be opened early, that is, as soon as matter is formed. Abscesses in the palm of the hand and sole of the foot, and those which form close upon any bone, are of this kind; indeed, such a practice is highly advisable in any part, when the abscess appears bound down by any unyielding substance situated above it.

Such is the proper treatment of healthy acute abscesses occurring in sound constitutions. If the abscess degenerate into an ulcer, it must be treated according to the directions laid down in the pages immediately preceding.

But it not unfrequently happens, that abscesses are of an

indolent character, and occur in debilitated constitutions, when they, for the most part, require local applications of a stimulating nature, and cordial strengthening medicines to be taken internally. In these cases, matter is a long time in forming, and when formed is not healthy: it is often thin, curd-like, sometimes bloody, and generally small in quantity. Here, a stimulating poultice, made by wetting oatmeal with a strong solution of salt and water, should be applied cold, night and morning; or the poultice may be made of oatmeal, water, and yeast mixed together to a proper consistence. After one of these has been used for a short time, the part may be covered with compound galbanum plaster, or the plaster of ammoniac with quicksilver, spread on leather. At the same time, the sulphate of quinine pills, No. 115, page 124, or the mixture of carbonate of ammonia, recommended at page 115, must be taken thrice a day, and the patient should have the advantage of a generous diet, but moderate in quantity, with pure air, and daily exercise. The bowels must be kept regular by the occasional use of the pills, No. 100, page 120.

The abscess in the female breast, called the MAMMARY, or MILK ABSCESS, should not, I think, be treated with warm, but with cold applications. Dr. John Clarke *(Essays on the Diseases of Lying-in Women)* strongly advises against the employment of warm applications; and Dr. Dewees, of Philadelphia, (a physician of extensive practice, and considerable judgment,) remarks, *(Treatise on the Diseases of Females, fourth edition, p.* 504,) "It should be a never failing rule, to treat a mammary inflammation as if it were not to suppurate." He likewise says, he has "never found any application so successful in the very early stage of this disease, as the frequent use of warm vinegar to the part. Its efficacy appears to us so certain, when sufficiently soon employed, that we need not in many instances look for any other remedy. It is particularly prompt in that condition of the breast, in which a want of proper drawing leaves them; or where they become greatly and painfully distended by the sudden secretion of milk, but which cannot be extracted with ease, or in sufficient quantity to relieve the tension." In my *Treatise on the Diseases of Females*, I have noticed, with much approbation, a plan of treating milk abscess by bandaging the whole breast with broad strips of adhesive plaster. This plan is peculiarly valuable from its having an extraordinary influence in relieving pain, and being applicable to every stage of the abscess.

OF VOMITING.

Vomiting, or sickness, is a very distressing affection, and when it proves obstinate or severe, calls for the immediate assistance of art, in order to its being removed.

Its causes are various; but it is much oftener a secondary and sympathetic affection, depending upon the existence of some severe disease in the system, than an original complaint. When it appears in the latter form, it is generally dependent upon a peculiar state of chronic debility in the stomach, or first intestines.

Treatment. When vomiting arises from the irritation occasioned by the existence of any severe disease in the constitution, as inflammation of the stomach, cholera morbus, affections of the head, &c. it can seldom be effectually removed but by removing the original disease upon which it is dependent; still certain means are found to afford relief, and the most powerful of these are the saline effervescing draught, No. 24, page 102; small doses of Epsom salt, largely diluted with water, as a drachm of the salt to a half pint of water; a combination of camphor and opium, or of vitriolic acid, conserve of roses, and peppermint water, strained; curds and whey, and the application of a blister to the pit of the stomach. When any inflammation exists in the stomach, or any other part, opium must not be given, unless in conjunction with calomel; but the saline draught, No. 24, or the draught of Epsom salt and water, may be repeated frequently in the day, if necessary. Sometimes Epsom salt, largely diluted with water, will stay on the stomach when every thing else has been rejected; and I have known a drachm of this salt added to a draught of common soda water, made with the soda powders, to be of eminent service. Should this fail, and no acute inflammation be present, half a grain of opium may be made into a pill with three or four grains of camphor, and taken every three or four hours, till relief is gained. Twenty or thirty drops of diluted vitriolic acid, with half a drachm of conserve of roses, and two or three ounces of spearmint and peppermint water, forms a draught which is frequently of great benefit: it should be strained through fine linen before it is taken.

A strong infusion of cloves, given to the patient by tablespoonfuls, is an admirable remedy, and one which will succeed when almost every thing else fails.

Curds and whey, carefully made, are very useful in allaying violent vomiting, and will often succeed in extreme cases. The curds must be quite light, and scarcely separated from the whey.

For the sickness which so frequently harrasses pregnant women, either of the means just noticed may be had recourse to. In their case, two or three ounces of infusion of columba is often an efficacious remedy. It may be frequently repeated. A draught composed of twenty drops of diluted nitric acid, and two ounces of water, is also often very serviceable. Women in this situation, who are much troubled with nausea and vomiting, should be a great part of the day in the open air, and be careful to keep the bowels regular by the occasional use of the brimstone electuary, No. 37, or 38, page 105, or the mixture, No. 74, page 114. In a very severe case of vomiting of this kind, that had resisted all the usual means of relief, and which continued so incessantly as to become alarming, a blister applied over the pit of the stomach succeeded in removing it.

For the sickness which occurs in weakly habits, from some primary complaint of the stomach, the most efficacious remedies are, the metallic tonics, especially preparations of zinc, bismuth, and iron. The nitric acid in infusion of quassia, or of columba, is also useful;—twenty or thirty drops of the diluted nitric acid may be taken in an ounce and a half of either of these bitter infusions, twice or thrice a day. Perhaps the most generally useful medicine here, is the white oxide of bismuth, which may be taken in the dose of two grains and a half, made into a pill with extract of gentian, and repeated thrice daily; the dose being gradually increased to four or five grains in each pill. The pills No. 102, 103, 104, or 105, page 121, may likewise be tried. In this chronic state of the complaint, great attention must be paid to diet and regimen, as advised under INDIGESTION; and also to the regulation of the bowels by the occasional use of the pill, No. 100, or 101.

There is a peculiar affection of the stomach, called *water-brash*, or *black-water*, in which the patient brings up frequently a considerable quantity of thin watery liquor, and which I would notice in this place. This complaint attacks mostly persons past the middle age, particularly females, and the fit comes on generally in the morning and forenoon. It usually begins with a pain at the pit of the stomach, attended with a sense of constriction, and soon after a quantity of thin watery fluid is thrown up, which is sometimes insipid, at other times of an acrid taste. The causes of this complaint are various, but whatever debilitates the stomach may give rise to it in those so disposed. It appears to be owing to a peculiar state of stomachic debility and irritation; and is most certainly relieved by the use of the white oxide of bismuth as above recommended. This medicine will often perfectly cure *water-brash;* but attention to the diet and regimen laid down under INDIGESTION is

of much consequence, and will be absolutely necessary in order to render the cure permanent. A diet chiefly of animal food is the best here, with which may be united the use of biscuits, home-made bread, tea, cocoa, brandy and water, good white wine and water, and lime-water. Daily exercise abroad must also be taken, and friction, with the flesh brush, over the region of the stomach and bowels is of no small service. If the bismuth cannot be got, or is not effectual, either of the pills, No. 102, 103, or 104, page 121, may be used as there directed, and are often of great service. They may be taken alone, or each pill be washed down with three table-spoonfuls of infusion of quassia or gentian.

OF VOMITING OF BLOOD.

Vomiting of blood is a discharge of blood from the stomach, and is generally preceded by affections of that organ and parts in its neighbourhood. There is often pain or uneasiness of the left side, with anxiety, and a sense of tightness in the chest. The blood discharged is generally dark-coloured, grumous, and often mixed with some of the contents of the stomach. It may occur in persons of a full habit and robust constitution, but is most common in those who are weakly, or who labour under a faulty condition of the digestive organs.

Whatever greatly deranges the functions of the stomach, or produces internal obstruction, may give rise to it; and the *most frequent causes* appear to be grief, or other depressing or violent passions; costiveness, especially if occurring in a constitution in which the stomach is peculiarly irritable; blows on the region of the organ affected; fulness of habit combined with an intemperate mode of life. It is generally a symptom of something wrong in the system.

It is, in general, easily *distinguished* from spitting of blood, by the blood being here brought up by vomiting, and by its being of a deep modena colour. It is also generally mixed with some of the contents of the stomach. In spitting of blood, on the contrary, the fluid discharged from the lungs, is brought up by hawking or coughing, and is of a bright red colour.

Treatment. If this complaint occur in a person of a full habit, and possessing considerable general strength, it will mostly be proper for him to lose ten or twelve ounces of blood from the arm, and to take the purging draught, No. 27, or 28, page 103, at the same time observing a mild and spare diet, with quietude and rest. It will be advisable for him to repeat the draught every other morning for a fortnight, or a little longer, and afterwards to keep the bowels free from confinement

by its occasional use; and should there be a necessity for it, the bleeding may be repeated after an interval of six or eight days. These means will be generally sufficient to remove the complaint, but if any auxiliary be wanted, ten drops of the tincture of foxglove may be taken in camphor mixture, or in water, twice or thrice a day, for two or three weeks.

But vomiting of blood is commonly met with in the delicate, and those who are suffering from weakness and derangement of the stomach, and other digestive organs, and then the object is, to lessen irritation in these parts, by the use of mild astringents and aperients, and to strengthen the general habit by having recourse to cordials and tonics, in conjunction with a pure air, nutritious diet, and gentle exercise. Such patients may, therefore, take the draught of ipecacuanha wine and Epsom salt, recommended at page 681, twice or thrice a day, so as to keep the bowels gently open,* and observe the diet and regimen laid down at page 481. After the discharge of blood has been checked by these means, the tonic pills of sulphate of quinine, No 115, page 124, should be entered upon, and taken thrice a day, until the stomach and general system have recovered that degree of tone, which will pretty certainly secure the patient against the recurrence of the vomiting. During the time that these pills are taken, and indeed for ever after, the bowels must be kept regular by the use of some gentle aperient, as No. 100, page 120, the Seidlitz powder, or the pills, No. 104, page 121. Persons of a costive habit, attacked with this complaint, must pay particular attention to this point. If the sulphate of quinine does not agree, it may be changed for the pills, No. 105.

If it be necessary, from the great discharge of blood, effectually to put a stop to the vomiting immediately, an emetic of twenty-five grains of ipecacuanha powder should be taken, and if the first emetic fail to stop it, a second may be administered after an interval of two or three hours. This emetic is frequently of great service in the present complaint; but in order to render the benefit obtained from its exhibition permanent, in delicate subjects, the tonic plan just described must be entered upon without delay, and persevered in. This powder is applicable to the case of strong as well as weakly persons.

* "British practitioners, especially since the publication of Dr. Hamilton's Treatise, (on purgative medicines,) have placed great confidence in active purging, as the best mode of treatment in many cases of this disorder, more particularly in that form which occurs in young and middle-aged females, and is connected with uterine torpor, and a sluggish action of the bowels. In such cases, Dr. Bateman states, (*Reports on the Diseases of London*, p. 150,) as the result of his experience, that the success of this treatment is more decidedly conspicuous than in any other disease, in which Dr. Hamilton has recommended it."—*Dr. Goldie, in Cyclopædia of Practical Medicine, vol.* ii *p.* 399, 1833.

The superacetate, or sugar of lead, also, is a powerful medicine here, as well as in all other profuse bleedings. If the circumstances of the case are particularly urgent, it may be the first remedy resorted to, and should be taken as described at page 82. One of the pills there prescribed ought to be taken every second hour till the bleeding stops, when it must be laid aside.

After the blood has ceased to flow, and the patient begins to recover himself, if there appears to be any obstruction in the abdomen, an alterative calomel pill, as No. 98, or 99, taken every night, with four or five grains of the best extract of hemlock (page 109,) and a grain of ipecacuanha powder, thrice a day, the tepid bath at ninety-five degrees, occasionally, and a mild diet, will be found extremely beneficial. Change of air and scene should likewise be had recourse to, when practicable. The diet recommended under INDIGESTION, will, in general, be the most proper, and an attention to the rules there laid down, for the improvement of the general health and strength, can seldom fail to be followed by satisfactory results.

OF WARTS.

Warts are well known to be firm hard excrescences, growing from the skin. As they are adventitious substances, their powers of life are weak, and they may, consequently, be easily removed by the application of some strong stimulant to their surface. The best applications of this description are, the juice of cellandine, or of houseleek, concentrated acetic acid, and Goulard's extract undiluted (the solution of acetate of lead.) If warts are touched with either of these liquids, once or twice a day, they will in general disappear in a short time.

OF WATER IN THE HEAD.

Water in the head, as it usually appears, is an acute disease, and is truly an inflammation of the membranes or vessels of the brain, mostly a deep seated inflammation. The effusion of water into the ventricles of the brain is merely a consequence of the inflammation, and is, therefore, rather an effect of the disease than the disease itself.

The *chief symptoms* are, those of great constitutional irritation and inflammation of the brain, arising nearly in the following order. There is giddiness; momentary confusion from quick movement of the head; pains in the hands, feet, and nape of the neck; disturbed, unrefreshing sleep, accompanied by talking or mumbling; impaired appetite and thirst; a scanty discharge

by urine and stool; momentary changes in the colour of the complexion, and a disappearance of its natural bloom; heaviness of the head; a stumbling gait, without equilibrium and firmness; indifference to former amusements; peevishness; a natural pulse, only with a few pulsations weaker or omitted; fits of musing; sighing; dry skin.

In the second stage, when inflammation supervenes, the most remarkable symptoms are, a distressing pain in the forehead, pressing on the eyes, and continuing during sleep, which often alternates, with pains in the belly and stomach, with little fever; retreating of the eye backward into the socket, and aversion to light; in sleep it is only half covered, with contracted pupil; great restlessness; increased heat of the head; a pale and otherwise altered countenance; dry nose; hard cracked lips; a perfect absence of appetite and thirst; repeated vomiting, always increased by moving the patient; a peculiar foul smell in what is rejected; frequent sighing, and a peculiar fœtor of the breath; obstinate costiveness; scanty, turbid urine, with a white heavy sediment; acute hearing; pulse generally slow, sometimes quick, but almost invariably intermitting, irregular, and with weak, intervening strokes; a great falling in of the belly, without any increased discharge by stool; little or no flatulence; general and rapid emaciation.—I have said above, that there is rarely any fever in this stage, and these are the most common cases; but sometimes there is a vehement attack of fever, with convulsions, and other alarming symptoms of affection of the head.

These inflammatory symptoms may last from a few hours to two, four, or six days, or even longer; and when not overcome by the remedies made use of, are followed by those which indicate the effusion of water into the ventricles of the brain. When the effusion takes place, the restless desire for a frequent change of posture ceases, the patient lies on the side in an oblique posture, or on the back, and is observed to indulge in frequent movements of the legs, stamping against the bed clothes with one or both feet; there is a gloomy earnestness of countenance; all the external senses, except hearing, are dull or annihilated; the glance of the eye is oblique, or squinting, and the pupil dilated; the tones uttered are through the nose; the urine is passed unconsciously, but a stool can scarcely be procured; the pulse increases in irregularity and weakness; the breathing is more and more interrupted by sighs and deep moaning; the emaciation is extreme; and the heavy sleepy state in which the patient lies passes into a complete stupor. This state usually lasts for several days, and sometimes the little sufferer will regain his consciousness, for a short period, and even take

food, and ask for playthings. But this momentary change is deceitful, and soon the fourth stage is ushered in by general convulsions, spinal cramps, palsy on one side, and violent fever, followed by hectic redness of the cheeks, blindness, efforts to vomit without effect, pulse extremely quick, weak, and intermitting, difficult swallowing, and death sweats.

The whole duration of this disease is, in general, from twelve to twenty-one days. Death seldom takes place earlier than the fourth stage. It is a very dangerous complaint, and the prognostic is always unfavorable. The disease being detected early, and the proper remedies promptly applied; the symptoms having been subdued on the first or second day, and not returning for two or three days during a perseverance in them; and a general steaming perspiration breaking out during quiet sleep, and continuing several hours, after the employment of the necessary remedies, are favorable circumstances.

Late interference, and ignorance of the nature of the disease, are the grand causes of the great fatality of water on the brain.

This disease chiefly attacks children under seven years of age. Injuries of the head in the birth,—the hooping cough, small-pox, and scarlet fever,—strong and continued excitement of the brain, from severe application to learning,* or other causes,—great terror and anxiety in the mother during the last months of pregnancy,—and a scrophulous habit, dispose to it. And continued irritation from teething, or severe disorder in the stomach and bowels,—excessive cold applied to the head,—violent agitation of the brain from falls or blows,—violent vomiting, and suddenly suppressed discharges from ulcers, moist eruptions on the head, &c. are, perhaps, the most frequent causes which directly excite the disease. Almost any highly irritating cause may induce it in those disposed to it, but by far the most frequent source is a deranged state of the digestive organs. Some physicians suppose five cases out of six to originate from stomachic and intestinal irritation.†

Water in the head may in general be *distinguished* from worm fever, and other complaints resembling it, by strict attention to the symptoms above laid down, many of which do not

* "The parents and instructors of children of a peculiarly precocious intellect should be made aware of the danger of early and protracted application. In such individuals it should be our object, if possible, rather to retard than to accelerate the development of the brain and of the mental faculties connected with it; and it is only by postponing the interests of their intellectual to those of their physical education, till the constitution has become established and the period of danger is past, that this object can be obtained."—*Cyclopædia of Practical Medicine, vol.* ii. *p.* 473, 1833.

† It is certain, that in children the brain is the part most liable to suffer from the general irritation kept up by a deranged state of the digestive organs; and Dr. Philip is of opinion, that for once that water in the head arises from other causes, it arises twenty times from affections of these organs, a sentiment which I think cannot be justly controverted.

occur in those complaints. In the irritation produced by worms, or severe disorder of the bowels, the patient sometimes eats greedily, generally drinks thirstily, and often passes large stools, either spontaneously, or from the operation of medicines, and also a great quantity of urine; the pulse is quick throughout; and there are other symptoms of considerable fever; perspiration is frequent after eating and drinking, and usual on every increase of fever; the hearing is dull; sleep is often sound; there is little wasting of the body for many days; the belly does not shrink, and flatus passes audibly;—symptoms which are not found in the present disease.

We frequently meet with children out of health, who look pale, have large bellies and large heads, appear stupid at times, have confined or irregular bowels, and discoloured, and offensive motions, and fall down occasionally almost senseless, and such children are often, but very erroneously, said to have water in the brain, although they may continue in this state, sometimes better and sometimes worse, for many weeks, and are able to walk abroad. It should be recollected, that water in the head, properly so called, is a highly acute disease, consisting of distinct stages, and almost necessarily confining the patient to his room.

Treatment. As the immediate cause of this complaint is an inflammation of the brain, and the patient can rarely be cured but in the earlier stages of its progress, a vigorous depleting plan is clearly indicated in all cases, and must be carried into effect without the least delay. The most effectual remedies are, undoubtedly, blood-letting, calomel, cold applications to the head, purgatives, blisters, and medicines which have a cooling effect, and determine to the surface of the body.

The patient should be placed in a roomy airy chamber, screened from strong day-light, with the head and shoulders slightly raised, and every kind of noise be avoided. Blood must be immediately and freely drawn from the temples, nape of the neck, and arm, by the application of leeches, and the use of the lancet, the quantity of blood drawn being in proportion to the age and strength of the patient, and the severity of the symptoms. In very young children, a sufficient quantity of blood may be drawn from the head by the free application of leeches; but in older children, it will be often advisable to bleed from the arm as well; and it must be particularly noticed, that, in all cases strongly marked, the abstraction of blood must be very free and immediate, as this is a disease which will not admit of delay, and which cannot be overcome but by the employment of very active measures. As soon as the leeches have bled freely, the head should be shaven, and be kept con-

stantly covered with cloths wet with ice-water, or vinegar and water. The coldest water should be chosen, and ice-water, when it can be procured, is much to be preferred. The cloths must be repeatedly renewed, directly they contract any warmth. The use of blisters is also advisable, but the head is not, in my opinion, a proper place for them in any case of this malady, on account of their irritating qualities being likely to increase the irritation and inflammation existing within the head, if they are placed on, or very near it. They may be applied to the pit of the stomach, between the shoulders, or to the inside of the thighs, with the prospect of much advantage, especially after the painful symptoms about the head have been relieved by the abstraction of blood, and the use of cold applications. At the same time, two grains of calomel, mixed with ten grains of jalap, or rhubarb, should be given to clear the bowels well,* and its operation may be assisted, by giving a drachm of magnesia, saturated with lemon-juice, in water, or a little infusion of senna, every second hour. Immediately after this operation, alterative doses of calomel must be commenced, and persevered in. Generally speaking, I believe a small quantity of opium, combined with the calomel, will be better than giving the latter article alone, as it tranquillizes the existing restlessness, and allays pain, without increasing the fever; and therefore the following combination is, I think, among the best that can be recommended. If the child is very young, the quantity of opium used must be minute, as a quarter of a grain, instead of half a grain, in the six pills.

Take of calomel, six grains; James's powder, six grains; purified Turkey opium, half a grain; conserve of roses, a sufficient quantity to divide the whole into six pills. One pill to be taken every second or third hour, until an evident impression is made upon the disease, when the intervals may be lengthened to every fourth or fifth hour, or still longer.

I have before remarked, under the article on inflammation of the bowels, that the power of calomel in checking the progress of all acute inflammations is very considerable, and experience has proved it to be of the highest value in the treatment of the present complaint. It must, consequently, never be neglected. The cooling draught, No. 24, page 102, should also be given to the patient occasionally through the day. Saline

* "Purges have generally been given in this disease; but, when called early, what I recommend is the exhibition of the largest dose, which can with safety be prescribed, of some powerfully cathartic medicine, two, three, or four times a day, and this continued for several days, or until natural stools are procured. The advantage of keeping the intestinal canal under the continued influence of a stimulus, I have, in various instances, found to be so great, that I am induced to repeat the declaration of my belief, that the happiest result may be expected from this measure."—*Dr. John Cheyne on Dropsy in the Brain*, p. 96, 1808.

medicines are of no small service, more especially in the case of young children attacked with this disease, and nitre appears to be particularly indicated. It ought to form an ingredient in the draught, No. 24.

Of late years, physicians have become more and more convinced of the great value and necessity of active purging in this malady, more especially in the early stages. "While the disease is forming, there is generally," says Dr. John Cheyne, (*On Dropsy of the Brain*, p. 47,) "a defect in the function of the liver. It seems to admit of only a scanty and imperfect formation of the bile, insufficient to stimulate the intestinal canal, which becomes torpid, and is sometimes loaded with fœtid, clay-coloured excrement. This state of the canal, in conjunction with the disordered condition of the liver, is, perhaps, one cause of the dyspeptic symptoms which are almost invariably present in the beginning." He adds, "The increased arterial action on the surface of the liver, the remains of which I have observed in my dissections, to every appearance, had been of some standing, and in two or three instances, from the extent of the adhesions, it evidently had been of great intensity." Therefore, two grains of calomel, and ten grains of jalap, or of the compound powder of scammony, should be given every morning, or twice, or even thrice a day, if sufficient stools are not procured with a less quantity of the purgative.*

The continued application of cold water to the shaven scalp, is very likely to help us materially in arresting the increased activity of the circulation, provided it be used in the first stage. A cold lotion of spirit of wine and water, (consisting of three table-spoonfuls of spirit of wine, and ten of cold water,) may be freely applied to the head, or a bladder, filled with pounded ice, placed over it, and renewed as often as appears necessary. It is said, that the late Dr. Darwall, of Birmingham, had known cases, which seemed utterly hopeless, recover, by letting water drop in a small stream upon the scalp, and continuing it till the head no longer recovered its high temperature on intermitting the stream. This is a remedy more particularly applicable to well-marked cases, in which there is uncommon heat in the

* "Purging actively seems to Abercrombie," (of Edinburgh) "to be the remedy which is of the most importance in all the forms of the disease; and though he sets a due value on the aid of venesection, he believes that more recoveries from head affections take place, under the use of very strong purgatives, than under any other mode of treatment whatever. He has found the croton oil one of the most convenient and effectual cathartics in diseases of this kind, which are so often accompanied by great obstinacy of the bowels. Whytt," (the author of one of the first and most able publications on Water in the Head,) "never saw even temporary relief of the symptoms produced by any other means, than those which increased the evacuations; and Rush was likewise a strenuous advocate for the employment of medicines of this kind." *Dr. Joy, in Cyclopædia of Practical Medicine*, vol. ii. p. 468, 1833.

head, and it is similar in its nature and effects to the *cold-dash*, so strongly advised under INFLAMMATION OF THE BRAIN, at page 498. Dr. Abercrombie, of Edinburgh, is a strenuous advocate for its utility in this disease.

In addition to the above measures, a mustard poultice may sometimes be advantageously applied to the feet, but bathing them with warm water is rarely advisable.

The diet must be very simple, light, and cooling, consisting chiefly of barley water, toast and water, and thin gruel. In raising the patient to take food, medicine, &c. all quick, rough movements must be carefully avoided. It is of no small importance that the patient should be kept perfectly quiet, and be seen by none but the few persons necessarily required to attend him, and that for some days after the disease has been subdued. In recovering, a return to his ordinary food must be made slowly and very cautiously.

The above I believe to be the best and most likely means of conducting the disease to a favourable issue. Some physicians have recommended foxglove to be given at the same time, and others have placed much dependence upon the free use of mercury externally, in the form of ointment rubbed into the arms and thighs. Foxglove I consider a very doubtful remedy in well marked cases of this disease, and should never think of trusting to it in any degree, excepting in those cases which succeed to scarlet fever. In some chronic cases, simulating water in the head in some of its less acute and severe symptoms, it may be occasionally of service as an auxiliary to the pills of calomel and opium above noticed. The inunction of mercurial ointment promises greater advantages, and those who wish to try it may rub half a drachm of the stronger ointment into the inner part of the thighs, once or twice a day, until the mouth is affected, or the symptoms give way; but let me repeat, that I think there is sufficient evidence before the public to prove, that the internal use of mercury, in the form of pills as above prescribed, is far more powerful in arresting the progress of this disease, than its external employment, and I would, therefore, never allow the inunction to interfere with the prosecution of the plan of bleeding, and the use of calomel, cold applications to the head, &c. as first recommended.

Should the practitioner be fortunate enough to arrest the progress of the disease in its earliest stages, and the patient is evidently recovering, it is highly advisable that the blisters should be kept open for a few days; and, in some instances, where the constitutional tendency to the disease seems very strong, it will be very proper to make an issue, or pass a seton, in order to insure a perfect cure.

If the remedies employed in the above stages have occasioned a great deal of debility, the after treatment consists in giving small doses of infusion of bark, valerian, or gentian, with or without foxglove. Half the draught, No. 35, page 104, may be given to a child, mixed with an equal quantity of water, and repeated twice a day, or small doses of the mixture, No. 82, page 116, may be administered in the same way. If great irritability of the arterial system, evidenced by a quick irritable pulse, &c. exist, foxglove may now be taken with great advantage in conjunction with the tonic. A child may take four or six drops of the tincture in each tonic draught for a few days.

Those cases of indolent affection of the head, noticed at page 689, which are so often, but erroneously, called water in the brain, and supposed to be the same with the present complaint, must be treated with purgatives, alterative doses of calomel, change of air, a very careful diet, &c. as advised under DROPSY OF THE HEAD.

OF WEN.

A wen is a tumour contained in a cyst, or small bag. It is moveable, and has a pulpy feel. There are several sorts of wen, the difference between them being occasioned by the difference of the matter contained in the cyst, which differs chiefly in regard to its consistence.

In regard to the treatment, it is not often any advantage arises from the use of local applications, and wens are therefore to be removed in general only by the knife. Sometimes, however, a strong stimulant frequently applied to their surface, will disperse them when small, and recently formed; and of all stimulants electricity appears to be the most efficacious. Those who wish to try it, may have sparks drawn from the tumour, and slight shocks passed through it daily. A strong solution of salt and water is likewise a powerful stimulant in some cases of wens, and has been known to bring them away, by causing the cyst to open and discharge its contents. The surface of the wen must be bathed with this solution very frequently every day. No benefit can be expected in less than a fortnight, and sometimes not sooner than a month or two. I am disposed to think this remedy worthy of more attention in these cases, than it has yet obtained. A great advantage attending it is, that it gives no pain or inconvenience of any kind.

The operation of removing wens by the knife is attended with much less pain than is generally supposed; and sometimes a large tumour of this description may be opened and turned out, with its cyst, with a very inconsiderable degree of pain.

For the swellings sometimes found in the front of the throat, see BRONCHOCELE.

OF WHITES.

This complaint is technically called *Leucorrhœa;** and consists in a discharge of a colourless, yellowish-white or greenish fluid from the womb and its passage. Frequently, the discharge proceeds from the mouth or neck of the womb, and not from its cavity. In the mildest cases, the discharge is mostly of a whitish colour, sometimes almost colourless, small in quantity, and unaccompanied with any irritation in the parts; but in the severer examples, it is yellow, greenish, or dark coloured, thin, sometimes very acrid, and highly offensive, and occasioning itching, smarting, and other local symptoms of a very irritating nature. In most cases, there is pain and weakness in the back, and a sense of general languor; and when the disease is severe, and of long standing, it is generally associated with an unhealthy countenance, weak stomach, general debility, and a dry, hot skin.

Sir Charles M. Clarke considers those cases where the discharge is whitish and opaque, becoming creamy when rubbed between the fingers, and rendering water turbid, to be owing chiefly to an inflamed condition of the *cervix uteri*, or neck of the womb. In these instances, there is rarely an abundant discharge, but much disorder of health and local pain are present.

It occurs most frequently in women of delicate constitutions, or in those whose strength has been greatly impaired by profuse evacuations, poor diet, sedentary living, grief, or other *causes* of exhaustion. It sometimes, however, arises chiefly from debility and relaxation of the parts themselves, in consequence of hard labours, frequent miscarriages, or other causes.

Women of all ages are subject to it.

TREATMENT. The cure is generally difficult, and one principal source of this difficulty is an extreme inattention to the nature of the discharge. When a cure is practicable, we, for the most part, arrive at it only by slow degrees; and it is, therefore, highly necessary, when a patient experiences advantage from adopting any plan of treatment, that she should persevere with it, especially if she finds her general health improved at the same time.

Generally speaking, the principal object to be aimed at is, to give firmness to the general habit, and strength to the weakened

* There are numerous uterine diseases which give rise to discharges, and this should ever be borne in mind, for very often the term *whites* is applied to very dissimilar complaints.

and relaxed fibres of the womb and its passage, by the employment of vegetable and metallic tonics, or stimulants, vegetable and mercurial alteratives, cold bathing, pure air, and sufficient exercise, aided by a mild but nutritious diet.

In cases of a chronic character, where there is not much local pain and irritation, I advise the patient to take twenty or thirty drops of diluted nitric acid, in an ounce and a half of infusion of quassia, three times a day; to keep the bowels regular by an occasional use of the pills, No. 100, page 120, or the other means recommended under costiveness; and to use much active exercise in the open air daily, but short of any particular fatigue, observing the nourishing but mild diet advised under INDIGESTION. Sometimes the alkaline solution of sarsaparilla, page 100, (or the powder,) will be more useful than the nitric acid. If it be found agreeable, the cold bath may be used twice or thrice a week. Some very delicate women will find the most advantage from the tepid bath at about eighty-six or ninety degrees. Lime-water should be taken as common drink, or in the quantity of a pint a day, in divided doses; and a blister may be applied to the *sacrum*, or broad bone at the bottom of the spine, and occasionally repeated. Whatever the general plan of treatment may be, the lime-water and blisters are almost always applicable, and more or less serviceable. Should the bitter draught just prescribed not answer the wishes of the patient, she may change the infusion of quassia for that of simarouba bark, which has been strongly recommended by some professional men.

If the above means fail, I would advise a trial of the following pills during the day, instead of the above bitter draughts, the other parts of the preceding plan being still strictly adhered to. These hemlock pills have been of eminent utility in many cases, and are particularly worthy of attention when great pain attends this disorder, and in cases, where, from the irritation, tension, and heat present in the parts, we have reason to suspect an inflammatory condition to exist.

> Take of extract of hemlock, prepared in vacuo, two drachms; guaiacum, in powder, a drachm.—Mix them, and divide the mass into thirty-six pills. Take one pill three times a day, for eight or ten days, then increase the dose to two pills.

The alterative pill, No. 98, or 99, page 120, should also be taken every night, or every other night, at the same time, especially if the disease be obstinate, or there appears to be internal obstruction, or chronic inflammation. This pill is a valuable alterative, and will frequently be of great service in correcting the diseased actions of the womb. It is applicable to most instances of the complaint, whether occurring in the young or old.

The tincture of Spanish-fly I think very highly of: it is one of the most efficacious remedies, and may be taken in doses of thirty or fifty drops, or more, thrice daily in water. It should be increased in dose until it produces either scalding in making water, or a sense of heat in the parts, when it may be laid aside for a few days, and then resumed. See my *Treatise on the Diseases of Females.*

Preparations of steel or zinc are sometimes useful when the patient is weakly, and if the foregoing means are not found to be productive of satisfactory advantage, the pills, No. 102, 103, or 105, page 121, may be tried. The chalybeate water of Tunbridge, Brighton, and other places, is proper in those cases with which the steel pills agree. The muriated tincture of iron is an excellent form of taking steel in this malady. The dose is from twenty to fifty drops, twice daily, in water.

In certain cases, repeated emetics have had a very beneficial influence in so changing the condition of action in the vessels of the part, as perfectly to cure the discharge. This plan may be tried with the prospect of advantage when the disease proves obstinate, and can rarely be injurious unless great debility is present. Fifteen or twenty grains of ipecacuanha powder, taken in water, is a proper emetic, and may be repeated every other morning, or twice a week.

The balsam of capivi will sometimes be a useful auxiliary to the preceding means, When the disease depends upon debility and relaxation of the general system, it can hardly be expected to succeed alone; but from its power of stimulating the uterine passages, it may sometimes materially assist in the general plan. It appears to be often useful when the whites follow the final cessation of the monthly courses, and are attended with a bearing down, and other painful symptoms in the parts. The manner of taking it may be learnt by referring to page 6.

When the discharge is of an acrid nature, and long standing, it will not be proper to attempt the suppression very quickly. In such a case, it will be advisable for the patient to take a purging draught, as No. 27, or 28, page 103, every other morning, or three times a week, with the alterative pill, No. 98, every second night, for three or four weeks, and to use one of the astringent injections above noticed, reduced in strength by the addition of an equal quantity of water. These mild cooling measures are particularly eligible if the patient be of a full or gross habit, as a soluble state of the bowels is then found to afford very sensible relief, and opens the way for the more effectual operation of other remedies. If, in a case of long standing, the patient be reduced in strength, and of a feeble habit, the pills, No. 100, or 101, may be substituted for the

draught, No. 28, or the latter taken a little weaker than ordered at page 103, and she may take also the tonic draught of nitric acid and infusion of quassia, once or twice a day. After the use of the opening medicine for the time now specified, the patient should have recourse to the hemlock pills, the balsam of capivi, preparations of steel, or the other means previously advised.

When the pain and irritation are considerable in this disorder, and these symptoms are not relieved by the foregoing measures, a pill composed of half a grain of opium, and a grain of calomel, will frequently give great ease. If necessary, it may be repeated every night, instead of the pill, No. 99; or instead of this pill, the compound powder of ipecacuanha may be taken in doses of three or four grains, and sometimes will be of the greatest use, in mitigating the severity of these symptoms.

In some cases, which occur in debilitated persons, the application of a strengthening plaster to the loins, as No. 131, or 138, page 130, will be useful; or, when the discharge appears to depend on local relaxation, cold water may be pumped on that part every morning.

In the majority of instances, the diet should be nutritious, and in all it must be easy of digestion, and moderate in quantity. The general regimen advised under INDIGESTION is the most proper; and it is of much consequence the patient should never forget that a principal object in the treatment of her case is, to restore firmness and health to the whole frame, by perseverance in the use of suitable diet, exercise, and change of air, in conjunction with internal medicines, and local applications. When the constitution is much disordered, it is in vain to endeavour to restore it to health by the employment of strengthening medicines alone; the diet and regimen must be strictly attended to at the same time, and it is too often from a neglect of these means, that women fail to gain much relief in the present disorder. If the patient be of a costive habit, the removal of that state should be accomplished by the use of the measures advised at page 340.

In my TREATISE ON THE DISEASES OF FEMALES, the reader will find more ample information on the difference in the various kinds of discharges which simulate *whites*.

OF WHITE-SWELLING.

This is a disease of one of the larger joints. It is mostly of a slow or chronic character, and occurs chiefly in the knee-joint, although the elbow-joint, hip-joint, and even the ankle-joint, are not unfrequently the seat of it. In the present observations I refer principally to the disease of the knee-joint.

The *first symptom* is often a deep-seated, dull, heavy pain in the joints, which is not constant nor severe, but is usually much increased in using the joint. It is generally seated in one particular part of the joint. In white-swelling of the knee-joint, the patient keeps the knee bent, and from the pain occasioned by extension, gets into the habit of only touching the ground with his toes. At first, there is no external swelling or inflammation, but in the progress of the disease the knee swells, and gradually increases in size, but the skin is not at all altered in colour, and the swelling is generally so firm as to yield very little to pressure. In the slowness or rapidity of its progress, and in the severity of the pain, the disease differs much in different cases. Sometimes the pain is very acute, and the swelling gradually attains to a very large size. In the end, collections of matter often form about the joint, and at length burst, and discharge a thin curd-like matter. But it is not unusual for the disease to continue for several years without the formation of any abscess, particularly if the patient has been under correct treatment.

When the disease goes on to a fatal termination, hectic fever arises, and destroys the patient, unless the limb be removed.

This disease mostly occurs in scrophulous subjects, and rarely after five-and-twenty, or thirty years of age. It is, however, not unfrequently met with in young persons whose constitutions are delicate, but who have never given any decided proof of a scrophulous habit.

When there is a constitutional disposition to the disease, a blow, fall, or any other kind of mechanical injury, may excite it into action. With such a predisposition, it is also not unfrequently induced by long continued disorder of the digestive organs, or whatever greatly deranges the general health.

There is a rheumatic affection of the larger joints, particularly of the knee-joint, which in some of its symptoms resembles white-swelling, but which, although it is for the present, perhaps, quite as painful, is essentially different from the latter, and proves ultimately much more tractable. This rheumatic affection appears mostly in young persons of a full plethoric habit, who are disposed to other forms of rheumatism; and is induced

by imprudent exposure to cold, or other accidental causes of that malady.

There are likewise other diseases of the joints, which differ widely from white swelling, properly so called, but it would occupy so large a space in the present article for me to enter into a particular description of them, that I can only advise an immediate application to some professional man of superior judgment, whenever there appears any doubt respecting the real nature of the case. The chief of these diseases differing from white swelling, are a thickened and otherwise diseased state of the internal membrane of the joint, called synovial membrane, which secretes the lubricating fluid of the joint,—an inflammation of this membrane, of a peculiar character,—and a state of chronic disease in the joint, supervening an attack of healthy acute inflammation, which, from neglect, or improper treatment, has degenerated into an unhealthy indolent complaint.

Treatment. This disease is universally acknowledged to be of a serious nature, often difficult of cure, and always requiring great attention and perseverance. Here, trifling is certainly followed by the loss of the limb, or the destruction of life; and the use of half-measures, or a want of perseverance in the employment of the most effectual remedies, never fail to disappoint the patient, and aggravate the disease. In treating white swelling, it must not be forgotten, that it is a disease of debility, occurring mostly in delicate constitutions, and will, therefore, require the persevering use of those means which are capable of restoring firmness and health to the general system, as well as of those which are more directly calculated to arrest the progress of the local injury. I am desirous of impressing this view of the treatment on the mind of the sufferer, from being fully persuaded of its correctness and importance, and because I think it is too often overlooked. Local measures are of the utmost consequence, but general means, of an invigorating nature, must be resorted to at the same time, and it is from this union, and from this alone in the majority of instances, that we can reasonably hope to conduct the complaint to a favorable issue.

In my opinion, one of the best plans of treatment that can be suggested is, to cover the knee with a poultice made of sea-tang, or the common sea-weed containing small bladders filled with a glutinous matter, bruised; to take a tea-spoonful of the alkaline solution (page 2,) thrice a day, in milk and water, or mild beer;* to keep the bowels regular by diet, and the occasi-

* Not long since, I met with a little boy, the son of a surgeon of ability in Bristol, who had lately suffered severely from white-swelling, but was then recovering, after having taken this alkali with much benefit.

onal use of the pill, No. 100, page 121, or by No. 121, page 125; and to allow a generous mild diet, consisting chiefly of animal food, eggs, biscuit, good malt liquor, and white wine. At the same time, the patient must have the advantage of a pure country air, and as much of it as can possibly be taken without exercising the affected limb; and he must retire and rise early, and sleep on a mattress. This poultice should be renewed twice a day, and at each removal, the joint should be fomented with a strong solution of salt and water, used lukewarm. A generous diet is highly proper, but care must be exercised never to load the stomach, or to take any indigestible food, however small in quantity, since excess or imprudence in these respects, will rarely fail materially and immediately to injure the joint. The diet ordered under INDIGESTION is the most suitable, and further information on this point will be found at page 154, and the following pages. The joint must be kept perfectly quiet, and the straight position of the limb is in general the best. In most instances, I would also give one of the pills, No. 98, page 119, with the addition of six or eight grains of the best Turkey opium to the ingredients there ordered, every night, or every other night. This pill has great power in relieving pain, and sometimes in arresting the progress of organic mischief; and is applicable to most cases of the present disease.

The sea-weed cataplasm is, I think, one of the most efficacious local applications, but if it does not answer, a vinegar poultice, (made by stirring oatmeal into the best vinegar,) may be applied in the same way. This will in a few days bring out some pimples on the surface of the joint, when it must be laid aside, and the pimples anointed, once or twice a day, with a stimulating ointment, as No. 89, page 117, or washed with the lotion, No. 44, which will heat them and occasion a discharge. This discharge should be kept up as long as possible; but when the pimples disappear, cover the joint with a piece of soap plaster. After the pimples have disappeared, it will often be advisable to renew the application of the vinegar poultice, and to proceed in the same course again, and that repeatedly. This poultice is highly thought of by Sir Astley Cooper.

The tartar emetic ointment, (page 29,) is likewise a very useful application, and is much approved at the present day. It acts in the same way, as the vinegar cataplasm, and the object in using it is, to produce and maintain a discharge from the external surface of the joint, and thus to relieve the internal parts; but it has not appeared to me to be in any degree so useful as the sea-weed.

The practice of keeping up a discharge from the surface of the affected joint by the use of a perpetual blister, or the re-

peated application of blisters, is justly much approved by the best informed of the profession; and if the preceding means do not afford satisfactory relief, they may be tried with the prospect of considerable advantage. The blister should be large, and if a perpetual drain of this kind be aimed at, it may be dressed once a day, or oftener, with the savine ointment, and a bread and water poultice occasionally applied. Sometimes blisters create a great deal of inflammation and pain in the part, and excite not a little disturbance in the constitution, when, of course, they ought not to be persevered in. Caustic issues and setons do not appear so well adapted to white swelling of the knee, as to disease in the hip-joint. I have known them injurious in the former case, but do not recollect to have met with a case in which they were beneficial.

Iodine (page 44) has great power over some cases of the present disease, and is worthy of trial when other means fail. Indeed, it will often be advisable for the patient to commence with this medicine, particularly if the sea-weed cannot be procured. Half a drachm of the hydriodate of potash may be mixed with an ounce and a half of hog's lard, and about the size of a nut rubbed gently over the joint, night and morning, for ten days, when it must be discontinued for five or six days, and then resumed, and laid aside again for the same period, and so on as long as it is employed. I have lately found this ointment of very great service, as a local remedy in this disease. A solution of this substance may also be taken inwardly at the same time, if the symptoms are urgent; but it is a very active medicine, and must be used cautiously. The solution is formed by dissolving half a drachm of the hydriodate of potash in an ounce and a half of rose-water, of which a child of ten years old may take six drops twice a day, in infusion of chamomiles, or with the alkaline solution already advised.—See the directions at page 45.

With respect to the employment of other internal medicines, should the alkaline solution not agree with the patient, I would remark, that preparations of steel are often of considerable service. The muriated tincture of iron is an excellent tonic, and may be taken in doses of twenty, thirty, or forty drops, thrice a day, in an infusion of chamomiles. Or the pills, No. 102, or 103, may be tried. Beside this class of remedies, the mineral acids, sulphate of quinine, and carbonate of soda, are sometimes taken with much advantage. When the formation of abscesses excite fever in the system, the sulphuric or nitric acid is peculiarly eligible as a tonic and refrigerant. For the doses, see pages 60, 81. The sulphate of quinine pills, No. 115, are proper; or if there be much general irritation present, a grain

or two of this substance may be made into a pill with three or four grains of the extract of hemlock, prepared in vacuo, and given thrice daily. If the hemlock be useful, which it frequently will be, the quantity now ordered may, if it seem desirable, be augmented to five, six, or even eight grains at a dose.

The *ioduret of iron* will often agree better, and be more beneficial, than either iodine or iron given alone. It combines these two valuable medicines, and may be given as a tonic, having a salutary influence over the capillary system, in doses of from twenty to forty or sixty drops of the solution, thrice a day, in water. This solution is well made by Mr. Squires, Chemist, Oxford Street, corner of Duke Street, but it may also be obtained from Allen's, Plough Court, and most able chemists.

I must not omit to notice the application of leeches in this disease, since it is a very frequent practice with many professional men, and is often resorted to improperly. In the commencement, the local abstraction of blood is sometimes useful, if the strength be not much reduced; but at a later period should, I think, be almost invariably avoided, unless inflammation is present. Indeed, when slight inflammation occurs, and the pain is considerable, it will be better to relieve these symptoms by having recourse to the sea-weed poultice, or a cold salt and water poultice, or the iodine ointment, in conjunction with the above pill, No. 98, every night, and perfect rest; more especially if the disease has followed measles, small-pox, or any other debilitating cause whatever. For it must never be overlooked, that this is a disease of debility, of local as well as general weakness, and, under such circumstances, the abstraction of blood should be studiously avoided. Leeching here will, no doubt, often afford present relief, but appears to have an unfavorable influence ultimately; and I think an equal, if not superior, benefit may almost always be obtained from the use of the other means just noticed.

Sea-air and sea-bathing have long been regarded as valuable auxiliaries to the foregoing plans, and when they can be obtained, sometimes prove of material service; but particular parts of the coast do not agree with certain individuals, and, therefore, if on making a removal of this kind, the patient grow worse, we ought to endeavour to ascertain whether it be owing to the situation, and should this conclusion be made, an immediate change of place must follow. Great Malvern is a very eligible situation for such patients, on account of the purity of its water, and the uncommon salubrity of its air.

I have said above, that perfect rest should be observed, and

it is material that the patient should attend to this advice.* If by keeping the joint constantly at rest, it become stiff, this stiffness may often be entirely removed by active friction for an hour or two every day, after the patient has perfectly recovered. Of course, it must not be attempted till the disease has been entirely subdued.

In DISEASE OF THE HIP-JOINT, the leg and thigh of the affected side appear lessened in circumference, and the limb is elongated, in the commencement, but afterwards it becomes shorter than the sound limb; all the motions of the joints are impeded and painful; if the surgeon attempts to turn the limb inwards, it occasions particular pain; and great uneasiness is felt when, after laying the patient on his back, pressure is made on the front of the joint, near the groin, or if he lies on his face, and the pressure is made on the back part of the joint.

The treatment of the disease is similar to that just recommended for white-swelling of the knee-joint. Caustic issues or a perpetual blister, with perfect rest, are here the most effectual remedies, particularly if the disease be of some weeks standing. In the very commencement, leeches are useful if much pain or uneasiness attend.

OF WHITLOW.

Whitlow is an inflamed and exceedingly painful swelling, terminating in an abscess by the side of a nail. The excessive pain and irritation produced by this little swelling, arise chiefly in consequence of its situation under the nail, and thickened skin at the end of the finger or toe, which, from their unyielding nature, confine the inflamed part, and prevent its coming properly forward, and discharging the matter formed.

Whitlows so frequently trouble some persons as to prove, that they are produced by constitutional indisposition; but the most usual causes are of a local nature, especially bruises, pricks with a sharp pointed instrument, and other ordinary sources of inflammation.

TREATMENT. A principal point in the treatment of this complaint is, to sooth and soften the part affected by the free

* "To obtain rest for an inflamed joint is one of our grand principles in the treatment, and no good can be done without it: it is curious to observe how nature herself directs this; for where a joint is diseased, the muscles which act upon that joint have lost their power: thus, if a man has an inflammation of the wrist, and you put your hand into his, and desire him to squeeze it, you find that he cannot do so, or that the attempt is exceedingly feeble. In inflammation of the joints of the lower extremities, the muscles of the part in like manner lose their vigour."—*Sir Astley Cooper's Lectures, No.* 6.

use of warm fomentations and poultices, which render the nail and skin supple, and thus assist in the formation of healthy matter, and its free discharge. If the inflammation be considerable, it will sometimes be advisable also to apply a leech or two to the part; and when the pain and irritation continue severe, notwithstanding the employment of these measures, a grain of opium and a grain of calomel should be made into a pill, and taken directly. It is very proper for the patient to take this pill at bed-time, if the pain be so great as to threaten him with the loss of rest. In most cases, it will be useful to take a little opening medicine, as No. 28, or 74, page 114, as soon as the whitlow is detected.

After fomenting and poulticing well, an early opening should in general be made, by putting the point of a lancet into the most prominent part of the swelling, if the abscess does not burst spontaneously; and the nail ought to be pared away as thin as possible, and if there be any portion of it loose, it should be removed. In this way, pressure on the part will be much lessened, and a free outlet be afforded for the escape of matter. When the abscess has burst, or been opened, it is proper to continue the warm poultice for a day or two, or longer, renewing it every eight hours; and after that time, if the ulcer goes on well towards healing, it may be dressed with Turner's cerate (No. 95, page 119,) or the saturnine ointment, No. 94, twice daily. But should it prove troublesome after bursting, and the poultice appear to have little effect upon it, I would advise the patient to lay a small blister over the whole of the affected part. This occasions an increased discharge from the ulcer, gives a new and salutary stimulus to the diseased parts, and is attended with immediate and manifest benefit. After the blister has been on fourteen or fifteen hours, it may be removed, and the surface dressed with spermaceti cerate, or the ointment, No. 94, until it is well. If the complaint be obstinate, it may require the application of two or three blisters before it will heal effectually.

Fungus, or proud flesh, sometimes arises in these cases, but it is not advisable to apply caustic to it. If the patient proceed in the manner above described, this fungus will disappear.

Those who are frequently troubled with whitlow, should enter on a course of the pill, No. 99, every night, with the pill, No. 104, twice a day; or, if that course does not satisfactorily improve the general condition, the sarsaparilla pills may be tried.

OF WORMS.

There are several kinds of worms which infest the intestinal canal of man, but the chief are the *ascarides*, or small white thread worms, (varying from the eighth of an inch to an inch and a half in length,) mostly found in the rectum, or last gut; the *lumbrici*, or long round worms, usually found in the small intestines; and the *tænia*, or tape-worm, which occupies the upper part of the intestinal tube, and is occasionally found in every part of it. The *lumbrici* are from two or three to ten or twelve inches in length, round, of a yellowish-white or brownish-red colour. The *tænia* are of two sorts; one, the common tape-worm, which frequently acquires a length from thirty to forty feet, and more; the other is passed off in pieces of a greater or less number of joints, or in single joints, bearing a considerable resemblance to the seeds of *gourds*.

Worms can hardly exist in so sensible and highly organized a part as the intestines, without producing some degree of irritation there, and we are certain that irritation cannot take place in that canal without producing, sooner or later, and in a greater or less degree, disagreeable effects in various parts of the system, and especially in the stomach and head. Hence these animals frequently occasion a variable appetite, which is sometimes deficient, at other times voracious; pains in the stomach; fetid breath; nausea; head-ache; vertigo and giddiness; cough; irritation about the nose and anus; disturbed sleep; and a disordered state of the bowels. In children, hardness and fulness of the belly frequently occur, with frequent slimy stools, and sometimes convulsive fits. In adults, as well as in children, worms not unfrequently give rise to severe epileptic fits; and sometimes occasion great emaciation.

Worms most frequently appear in those of a relaxed habit, especially in those whose digestive organs are weak; and an excessive use of vegetable food, of fruits, of sugar, or any other saccharine or highly nutritive substance, very strongly favours their generation. The reason why children are more infested with them than adults, appears to be chiefly because they are allowed to indulge in eating sweet things, to the partial or total neglect of salt. (See page 23). That worms are vastly more common in some countries or districts than in others, is unquestionable. It is said, that in Savoy and Chambray, also in Holland and Switzerland, they are remarkably common in every class of society. In Switzerland, the abundant use of milk and cheese, is supposed to be the principal cause of this condition.

Simple disorder of the stomach and bowels will often produce

all the symptoms above described, and, in some cases, it is difficult to ascertain whether worms do or do not exist in the bowels, when none have ever been discharged. In such instances, we can determine the real nature of the case only by an attentive consideration of all the symptoms, and the patient's habits, more particularly with respect to the use of food.

TREATMENT. The fundamental principle in the treatment of worms is, to strengthen the system generally, and the stomach and intestines in particular, and thus not only to dislodge them, but to render them incapable of reproduction. On this principle, it will be found almost invariably, that those medicines and plans of treatment are the most eligible, which tend directly to invigorate the whole constitution, at the same time that they expel the worms; and the principal remedies of this kind are, salt, preparations of iron, sulphur, and camphor, employed in conjunction with a suitable diet and regimen.

A great deal has, at different times, been said about the efficacy of certain medicines in the cure of worms, which I have not now named, but I believe that there are few cases which will resist the proper use of salt, more especially if the usual means of strengthening a weakly constitution be resorted to, and saccharine substances be avoided as much as possible. Salt is a natural and necessary stimulant to the digestive organs, it excites them to a healthy and vigorous action, and is particularly obnoxious to all kinds of worms. I would, therefore, advise persons troubled with these animals to increase their quantity of salt at each meal; to lessen that of every kind of sweet food; to avoid partaking much of vegetables; to regulate the bowels by the occasional employment of a mild pill, as No. 100, or 101, page 121, and to avail themselves of the usual means of strengthening the general habit, by having recourse to active exercise daily, early rising, the use of the cold or tepid bath, &c. These measures are highly advisable and useful, whatever kind of medicine be employed, and this is a point which I wish the reader to bear in mind. At the same time a dose of salt and water, for example, an ounce or two of common salt, dissolved in nearly half a pint of water, should be taken in the morning fasting, and repeated at the end of three or four days. This will generally act as a purgative, and will certainly bring away almost every kind of worm. If necessary, the repetition may be extended to the third or fourth time, and in very severe cases, the quantity of salt used at each dose may be increased to three or four ounces.

This plan is applicable to the cases of children, as well as to those of adults, and, from what I have before said, it will be perceived how necessary it is for them to be restricted in the

use of sweet things, and to be taught to make a free use of salt at almost every meal. As a purging portion for young children, half an ounce of salt dissolved in a quarter of a pint of water, will usually be sufficient: *—or the flowers of sulphur may be tried. Some persons speak of sulphur as a very efficacious remedy for the destruction of the small thread worm.

Preparations of iron are sometimes very useful in expelling these animals, and in strengthening the alimentary canal so as to preclude their reproduction. They are, in general, very appropriate remedies when considerable debility has been induced from the irritation excited by the worms. Therefore, if the patient be averse to using the salt and water purgative, he may take the pills, No. 102, page 121, not forgetting to attend, at the same time, to the advice given above respecting diet and regimen. In taking these pills, the quantity of carbonate of iron should be gradually increased to double what is ordered at page 121.

Camphor has been highly praised for its virtues in cases of worms, by many eminent physicians. An Italian physician of the name of Brera, who has lately published an approved work on verminous diseases, has great confidence in it, and asserts, that he has always employed it with marked success. Eight or ten grains of this substance may be dissolved by means of a few drops of rectified spirit of wine, in an ounce and a half of water, and taken twice or thrice a day. This may be tried alone, or taken in the intervals between the use of the salt and water purgative. It appears to be particularly efficacious in the destruction of the long round worms *(lumbrici)*.

For tape-worm, the oil of turpentine is an effectual remedy. An ounce may be given to an adult, or half an ounce to a child, and may be repeated to the second or third time in the course of a fortnight. It may be swallowed simply suspended on water. It is seldom advisable to repeat it more than three times, unless under the direction of a medical practitioner.

* I have lately (1832) met with an extraordinary case of indigestion, in which surprising and satisfactory effects followed the use of salt as a medicine. The gentleman who is the subject of this case, was led by what is said of salt in the first part of this book, to take a small tea-spoonful of it twice or thrice a day, with a view to give tone to the stomach, and to excite a new action in it, he having for fifteen years suffered more than words can express, from uneasiness in that organ, depraved digestion, and nervousness. After he had taken the salt a few days, he began in the morning to feel as if something wanted to come away, and calling for a hand basin he threw up a small clot of dark brown stuff, composed of salt and secretion from the stomach: this was repeated for several mornings, and at length he brought up a living creature in the middle of one of these dark masses, which, on inspection, was found to be a live spider of a peculiar shape and character: it lived several days, and is now preserved in spirit. In a day or two after, he threw up what appears to have been the nest or defence of the spider, presenting the appearance of a long cone of tough coagulated albuminous matter. His general feelings since, he describes to be as different from what they were formerly as can be conceived.

Lately the pomegranate bark has been found very useful in obstinate cases of tape-worm. Although it is only lately that it has been much recommended in this complaint, yet it is a very ancient remedy, and was highly extolled by Celsus, *De Re Medic. lib.* iv. *cap.* xvii. It appears to have advantages over the oil of turpentine, from its being quite harmless, not nearly so disgusting, producing its effect with great rapidity, and in not requiring any preparative treatment. The mode of administering it is, by boiling two ounces of the bark in a pint and a half of water down to a wine pint, the whole of which is to be taken in the course of the morning, fasting, in four draughts, with an interval of half an hour between each. Sometimes it will bring away the worm on the first day, in other cases it is necessary to repeat the medicine to the second, third, and even fourth time, precisely as above directed.

In the small white thread worm, so often infesting the last gut in children, half a pint or a pint of lime water should be injected once a day, and the purgative, No. 120, page 125, or a dose of castor oil, be given once a week, for three or four weeks. Or, instead of the lime water, a strong decoction of worm-seed, or a solution of salt and water, may be injected after the same manner. This plan is generally successful.

The bristly down of the pods of cowhage is also a powerful remedy for worms. It may be taken as directed at page 26.

A great number of other medicines have been recommended, as tin-filings, male-fern, tansy, rue, tobacco, &c., and several of them are very useful; but, I think, the preceding remedies, are the most powerful and the best, and so very rarely fail in affording satisfactory relief, that it does not appear to me advisable to take further notice of any other.

Ching's Worm Cakes, and other patent medicines sold for the cure of worms, are composed chiefly of calomel, or some other active purgative. They are, no doubt, sometimes beneficial, but the foregoing measures are far more eligible, and those who adopt them will find no need of resorting to any secret preparation.

The best diet for persons troubled with worms is that recommended for INDIGESTION, at page 480. Although I have so high an opinion of the virtues of salt in killing these animals, I would not be understood to advise the use of salted meat. Plenty of salt eaten with fresh animal food is good, but salt meat is very objectionable.

OF YELLOW FEVER.

The disease called yellow fever is a remittent fever, of a very severe character, occurring in the West India Islands, and other hot climates, and is so termed from the yellowish suffusion of the skin with which it is accompanied. By remittent fever is meant, one in which evident remissions in the severity of the symptoms can, at certain times, be perceived, although there is no complete interval from fever.

It has been called by various names, chiefly according to the places at which it has raged, and proved particularly destructive, and, therefore, we have, at different times, heard a great deal of the Saint Domingo, Philadelphia, Cadiz, Vera Cruz, Barbadoes, and Jamaica fever; but these are all essentially the same disease, originating in similar causes, displaying like symptoms, and requiring nearly the same plan of treatment. This is the fever which proves so frightfully destructive of human life at Sierra Leone, and other points on the African Coast, at Batavia, and all the other unhealthy islands of the East.

Physicians are generally of opinion, that there exists no difference whatever in kind, but merely a difference in degree, between yellow fever and the common remittent fever of the climate.

Yellow fever is properly considered as an inflammatory fever, of a very acute or active character. See page 402.

In taking a brief view of the *symptoms*, we may state them to be nearly as follows, viz. weariness and languor; faintness, giddiness, and pain in the head; chilliness, succeeded by a general heat, flushings of the face, and strong beating of the arteries of the neck and temples; excessive thirst, redness, heaviness, and burning in the eyes; frequent, small, oppressed pulse; nausea; the skin dry, or covered with a clammy moisture; great restlessness and anxiety; and a peculiar expression in the countenance of inward suffering. To these symptoms succeed a quick, hard, tense pulse; burning, fiery heat of the general surface; the countenance is highly flushed, the eye muddy and inflamed, the urine scanty, frequent sighing, and indescribable fidgetting; burning heat in the stomach, and violent retchings; a yellowish tinge appears about the neck and angles of the mouth, and by degrees spreads itself over the whole surface of the body; the tongue is clean and red on the edges, but furred in the middle; the mind is confused, and sometimes delirium arises. After this, the animal heat falls below the natural standard, the pulse abates in frequency and

force, and a general torpor of body, and indifference of mind, become conspicuous. The vomiting is copious and not to be restrained, the matter brought up being either like muddy coffee, of a faint brown with a tinge of green, or quite black; the delirium often rises high at this period, and the patient is outrageous; bleeding from the nose, ears, gums, and bowels generally occur, and are followed by faltering speech, stupor, and death.

In the abatement which takes place towards the close of the first fourteen or twenty-four hours, the appearances are often flattering, but unless the disease has been previously treated with effect, the symptoms return with increased violence and destroy the patient.

Undoubtedly the *chief cause* of this fever, in whatever part of the world it appears, is *marsh effluvia*, or the noxious exhalations arising from marshes and swamps; it may also be excited by the exhalations from masses of any vegetable matter in a state of putrefactive decomposition, although there are no swamps near. It appears to be principally owing to the extent and number of the swamps found on the Coast of Africa, of Java, Mexico, and other places within the tropics, that this fever proves there so frequent and fatal.

The documents sent home from abroad, seem to prove two points of great practical importance, viz. 1st. That even within the limited range of the marsh poison, its power is nearly inert, comparatively speaking, during the day; 2dly. That when nocturnal exposure has given rise to the disease, it is not contagious.

It is a disputed point whether yellow fever be or be not contagious; but it is worthy of remark, that the majority of those physicians who have frequently witnessed and treated it, in all its forms, and in different sultry regions, and who enjoy the greatest reputation for accuracy and skill, do not believe it to be contagious. In my opinion it is not contagious under ordinary circumstances, but may become so if a number of the sick be crowded together, and especially if free ventilation be not resorted to, and the accumulation of filth be permitted.

TREATMENT. Generally speaking, yellow fever commences with symptoms of high excitement in the system; in other words, it is of a highly inflammatory type, and then the most efficacious remedies are blood-letting, purgatives, especially calomel purgatives, the affusion or ablution of cold water, and free ventilation.

When, therefore, a patient, more especially if young and strong, is attacked with head-ache, giddiness, flushings of the face, full strong pulse, and other symptoms denoting an invasion of yellow fever, sixteen or twenty ounces of blood should

be immediately drawn from the arm; he should take a dose of purging physic, composed of five grains of calomel, three grains of James's powder, and eight grains of compound extract of colocynth, or twelve or fifteen grains of rhubarb or jalap; a large blister should be applied between the shoulders, or down the spine,* and he should drink freely of lukewarm diluting drinks, as tea, barley water, toast and water, and such like. If, by the use of these means, the symptoms are greatly relieved, and the attack appears likely to be overcome, the purging powder must be repeated once a day, or once in two days, and the same plan of dilution, by drinking freely of some simple drink, be continued, till recovery is insured. At the same time the whole surface of the body should be washed twice a day, with cold water, or the patient stripped naked, and the coldest water thrown over him, in the manner and at the times advised under TYPHUS; his apartments should be well ventilated; his bed-clothes and attendants few, and every other source of irritation avoided.

From the great irritability of the stomach often present here, it may be necessary to give a purgative in the smallest possible compass, and we can safely recommend the *croton oil*, a drop or two of which may be placed on the tongue, and usually with good effect.

But the great strength of testimony, in regard to the most powerful remedy in yellow fever, is in favor of mercury, especially of calomel, and that carried to the extent of affecting the gums. The majority of late writers on this disease, who have treated it extensively, regard it as the *sheet anchor*. Dr. John Arthur states, in an official report from Barbadoes, of the 17th of March, 1821, "I believe far the most recoveries have been after the use of this medicine in one shape or other." Another medical man says (from Berbice), that calomel was used with "*great advantage*, and one satisfactory conclusion to be deduced from its operation, when it affects the mouth, was that of the patients being on the side of safety." Dr. Francis, in referring to the treatment adopted in the epidemic of 1822, at New York, remarks—"Mercury was considered by some physicians as conspicuous among the curative means." The Spanish physicians of Cadiz, Gibraltar, and other parts of Spain, also strongly recommend it as a primary and chief remedy. Therefore five grains of calomel may be given in two pills, combined with a grain of opium, thrice a day, until the gums swell.

It ought never to be forgotten, that in very acute attacks of

* "Mr. Linton, of the Royal Navy, states in a report from Jamaica, dated Sept. 1830, that having placed a blister the whole length of the spine in a certain number of cases, the irritability of the stomach was relieved in all except one. Their application to the head is sometimes found beneficial in protracted cases accompanied by affection of the brain."—*Dr. Gillkrest in Cyclopædia of Practical Medicine, vol.* ii. *p.* 280, 1833.

yellow fever, we have but a few hours to work in, and, therefore, in the freedom with which we resort to the use of calomel, purgatives, and the cold affusion, we must ever be guided chiefly by the severity of the symptoms, the suddenness of the attack, and the importance of the organs whose destruction is threatened by its violence; and this is more especially true when the subject of the fever is young, vigorous, and lately arrived from a temperate climate. The employment of the lancet is seldom proper after the first twenty-four hours. Together with the above remedies, the effervescing draught, No. 24, page 102, may be taken every three hours.

The most grateful drinks are spruce or ginger-beer, and Hock wine and water, made weak.

If, by the use of the preceding remedies, we are favored to check the progress of the disease, great care will still be requisite to restore the patient from the state of extreme debility to which he is reduced. In this period, bark and wine must be given, the washing with cold or lukewarm water be continued, and the patient freely exposed to an open pure air. In the use of bark and wine, we must be regulated pretty nearly by the principles laid down under TYPHUS, although in the state of extreme weakness induced by yellow fever, it seems that these stimulants may be more freely taken than would be proper or safe in the former disease.

A free exposure to the purest air attainable is of great moment in every case and stage of the present fever, and in the advanced periods is, perhaps, more to be relied on than any other resource. It is, consequently, highly advisable, that when a patient is attacked with the disease in a low unhealthy situation, he should, if possible, be directly removed to a higher and more healthy spot, and there have the advantage of as much of the air of the day, as can be given. In general, no danger need be apprehended from removing a patient labouring under yellow fever through the open air: on the contrary, such an exposure is very generally more or less beneficial.

In some situations in sultry climates, as in the Gulph of Persia, and at Cape Coast Castle, and perhaps other places on the African Coast, yellow fever sometimes commences and proceeds with the symptoms of great general depression and debility, the high inflammatory symptoms being nearly or altogether absent, and in this case, blood-letting must not be resorted to, our great dependence being upon the free use of calomel purges, frequent washing with cold water, change of air, and the use of wine. Cold drinks are also proper; and good old Hock appears to be among the best of wines in all cases of yellow fever.

WITH THEIR PROPER DOSES FOR ADULTS AND CHILDREN.

In proportioning the dose of any medicine to the age of a child, it may be assumed, as a general rule, that a patient of fourteen years of age will require about two-thirds of the quantity proper for an adult; if seven years old, one half; if three years, one fourth; and if twelve months, one-eighth.

About sixty drops make a tea-spoonful—one drachm is equal to a tea-spoonful—and half an ounce to a table-spoonful.

MEDICINES.	DOSES. Adults.	Children from 1 to 3 Yrs.	Proper vehicle, &c.
Alkaline solution	1 to 3 drachms	10 to 40 drops	in water thrice a day
Aloes (as a purgative)	10 to 20 grains	not suitable	in pills.
—— (as an alterative and stomachic)	1 grain, thrice a day	not suitable	ditto.
——, compound tincture of	1 to 5 drachms		in water, thrice a day.
——, etherial tincture of	3 to 5 drachms		ditto.
Alum, whether common or burnt	10 to 20 grains		in water.
Ammoniac gum	10 to 20 grains		in pills, twice daily.
——, milk of	3 table-spoonfuls		thrice a day.
Antimonial powder	5 to 10 grains	1 to 2 grains	honey or jam.
Antimony, precipitated sulphuret of	1 to 3 grains	½ to 1 grain	conserve or jam.
Antimonial wine (as an emetic)	3 to 6 drachms	1 to 2 drachms	in water.
—— (as an alterative)	15 to 25 drops	4 to 6 drops	in barley water, or decoction of sarsaparilla
Aromatic confection	10 to 40 grains	2 to 10 grains	in cinnamon water.
—— powder	5 to 10 grains	1 to 6 grains	in water.
—— tincture	½ to 3 drachms	¼ to 1 drachm	in water.
Assafœtida gum	8 to 30 grains	2 to 5 grains	in pills.
—— tincture	1 to 2 drachms	10 to 20 drops	in water.
Balsam of capivi	10 to 60 drops	2 to 6 drops	in water and mucilage.
—— Peru	10 to 30 grains	2 to 5 grains	ditto.
—— tolu	ditto	ditto	ditto.

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absent, and in this case, blood-letting must not be res
our great dependence being upon the free use of cal
ges, frequent washing with cold water, change of air
use of wine. Cold drinks are also proper; and goo
ck appears to be among the best of wines in all ca
ow fever.

MEDICINES.	DOSES. Adults.	DOSES. Children from 1 to 8 Yrs.	Proper vehicle, &c.
Bark, Peruvian, in powder	10 grains to 1½ drachm	2 to 10 grains	in water or milk.
——— decoction of	1 to 4 ounces	2 to 4 drachms	
——— compound tincture of	1 to 4 drachms	12 to 20 drops	in water.
——— infusion of	1 to 4 ounces	2 to 6 drachms	
Calomel (as a purgative)	2 to 6 grains	1 to 2 grains	in conserve or jam, with six grains of rhubarb.
——— (as an alterative)	½ to 1 grain	¼ to ½ a grain	ditto, daily, with a grain of James's powder.
Camphor	3 to 20 grains	1 to 4 grains	in a pill.
——— julep	1 to 2 ounces	2 to 3 drachms	three or four times a day.
Canella Alba, powder of	10 to 30 grains	2 to 4 grains	in water.
Cardamoms, compound tincture of	½ to 2 drachms	5 to 12 drops	ditto.
Castor, powder of	5 to 20 grains	2 to 4 grains	in pills or water.
—— tincture of	½ to 4 drachms	10 to 20 drops	in water.
Castor oil	½ to 2 ounces	1 to 3 drachms	in water or mucilage.
Cascarilla, infusion of	1 to 4 ounces	½ to 1 ounce	
——— tincture of	½ to 4 drachms	10 to 20 drops	in water.
Catechu, extract of	10 to 40 grains	3 to 8 grains	ditto.
——— tincture of	½ to 4 drachms	12 to 20 drops	ditto.
Chalk, prepared	½ to 2 drachms	8 to 20 grains	ditto.
Chamomile flowers, in powder	10 to 20 grains	2 to 5 grains	in pills.
——— infusion of	1 to 4 ounces	2 to 4 drachms	
Columba root, powder of	10 to 20 grains	2 to 5 grains	in water.
——— tincture of	½ to 4 drachms	10 to 25 drops	ditto.
——— infusion of	1 to 4 ounces	2 to 6 drachms	
Cheltenham salt	1 to 6 or 8 drachms	1 to 2 drachms	in water.
Crab's-claws, prepared	20 to 60 grains	5 to 20 grains	ditto.
Cretaceous powder, compound	½ to 1 drachm	10 to 20 grains	ditto.
——— with opium	20 to 40 grains	5 to 6 grains	ditto.

Contrayerva powder, compound	15 to 30 grains	4 to 8 grains	in water.
Cream of tartar	1 to 8 drachms	10 to 40 grains	ditto.
Colocynth pill, compound	5 to 20 grains	2 to 4 grains	in pills.
——— extract (compound)	3 to 20 grains	1 to 4 grains	ditto.
Dover's powder (to sweat)	8 to 15 grains	not suitable	in conserve or jelly.
——— (as a mild anodyne and diaphoretic)	3 to 4 grains	1 to 1½ grain	in pill, four times a day.
Electuary, lenitive	1 to 8 drachms	½ to 2 drachms	alone.
Elixir of vitriol	10 to 60 drops	5 to 10 drops	in water.
Emetic tartar (as an emetic)	1 to 3 grains	½ to 1 grain	ditto.
——— (as an alterative, &c.)	⅛ to ⅙ grain	$\frac{1}{12}$ to $\frac{1}{16}$ grain	in jelly or camphor mixture
Epsom salt	1 dr. to 1 or 2 ounces	½ to 2 drachms	in water.
Foglove, powder of	½ to 3 grains	not suitable	in pill, thrice a day.
——— tincture of	10 to 40 drops	3 to 4 drops	in water.
——— infusion of	½ to 1 ounce	1 to 1½ drachm	twice a day.
Gentian, extract of	5 to 20 grains	1 to 6 grains	in pill.
——— compound infusion of	1 to 4 ounces	2 to 6 drachms	
——— compound tincture of	1 to 2 drachms	20 to 30 drops	in water.
Ginger, powder of	4 to 25 grains	1 to 3 grains	ditto.
——— tincture of	½ to 2 drachms	15 to 20 drops	ditto.
Glauber's salt	2 to 10 or 12 drachms	1 to 3 drachms	ditto.
Guaiacum gum	10 to 30 grains	2 to 3 grains	in pills.
——— ammoniated tincture of	40 drops to 2 drachms	15 to 30 drops	on sugar.
Hartshorn, spirit of	15 to 50 drops	5 to 10 drops	in water.
Hoffman's anodyne liquor	½ to 1½ drachm	10 to 30 drops	ditto.
Hemlock, powder of	2 to 23 grains	1 to 3 grains	in pill, thrice daily.
——— extract of	2 to 20 grains	1 to 4 grains	ditto.
Hiera picra	½ to 2 drachms	2 to 4 grains	in water.
Jalap, powder of	10 to 30 grains	2 to 10 grains	in water or jelly.
—— tincture of	1 to 4 drachms	½ to 1½ drachm	in water.
Ipecacuanha, powder of (as an emetic)	6 to 30 grains	3 to 6 grains	ditto.
——— (as an alterative)	1 to 2 grains	¼ to ½ grain	in pills.
——— wine of (as an emetic)	2 to 8 drachms	1 to 2 drachms	in water.

MEDICINES.	DOSES. Adults.	Children from 1 to 3 Yrs.	Proper vehicle, &c.
Ipecacuanha, wine of (as an alterative)	30 to 50 drops	10 to 15 drops	in water.
—— comp. powder of—See Dover's powder			
Iron, carbonate of	2 to 30 grains	1 to 3 grains	in pills, thrice a day.
—— sulphate of	1 to 6 grains	½ to 1 grain	in pills.
—— tincture of muriate of	10 drops to ½ drachm	4 to 10 drops	in water.
Laudanum	20 drops to 2 drachms	not suitable	
Lavender drops	1 to 4 drachms	10 to 20 drops	ditto.
Logwood, decoction of	2 to 3 ounces	½ to 1 ounce	
—— extract of	12 to 20 grains	2 to 6 grains	in chalk mixture.
Magnesia, carbonate of	20 to 60 grains	3 to 8 grains	in water.
—— calcined	10 to 30 grains	2 to 6 grains	ditto.
Manna	½ to 2 ounces	1 to 4 drachms	ditto.
Mercurial, or blue pill	3 to 6 grains	1 to 2 grains	in pills.
Mercury with chalk	4 to 10 grains	1 to 3 grains	ditto or jelly.
Misletoe powder	20 to 60 grains	10 to 40 grains	in water.
Musk	4 to 20 grains	2 to 5 grains	in pills.
Muriatic acid	8 to 20 drops or more	2 to 5 drops	in water.
Myrrh, in powder	10 to 60 grains	1 to 6 grains	in pill.
—— tincture of	1 to 2 drachms	10 to 20 drops	on sugar.
Nitre, purified	8 to 30 grains	2 to 3 grains	in water.
—— sweet spirit of	½ to 2 drachms	10 to 12 drops	ditto.
Nitric acid, diluted	15 to 35 drops	3 to 6 drops	ditto.
Nutmeg, spirit of	1 to 4 drachms	20 to 40 drops	ditto.
Opiate confection	10 to 30 grains	2 to 6 grains	ditto.
Opium, powder of	1 to 3 grains	Opium is rarely advisable in disorders of children.	
—— purified	½ to 5 grains		
—— tincture of	10 to 60 or 100 drops		
Paregoric elixir	½ to 2 drachms	10 to 20 drops	in water.
Peppermint, essence of	1 to 4 drachms	5 to 30 drops	ditto.

Poppies, extract of	2 to 20 grains	1 to 3 grains	in pill.
——— syrup of	½ to 2 ounces	½ to 1 drachm	alone.
Quassia, infusion of	2 to 4 ounces	2 to 4 drachms	
——— tincture of	1 to 2 drachms	10 to 20 drops	in water.
Rhubarb powder	4 to 30 grains	2 to 8 grains	in any thing agreeable.
——— infusion of	2 to 4 ounces	½ to 1 ounce	
——— tincture of	2 to 8 drachms	1 to 2 drachms	in water.
Rochelle salt	1 to 8 drachms	½ to 1 drachm	ditto.
Roses, infusion of	2 to 4 ounces	½ ounce	
——— conserve of	1 to 8 drachms	20 to 60 grains	in bolus or water.
Saffron	10 to 60 grains	2 to 6 grains	in pill.
Salt of tartar	10 to 30 grains	3 to 6 grains	in water.
—— of wormwood	ditto	ditto	ditto.
Sarsaparilla, compound decoction of	4 to 8 ounces		thrice a day.
Scammony, compound powder of	10 to 20 grains	2 to 10 grains	in jelly.
——— with calomel	ditto	ditto	ditto.
Senna, infusion of	1 to 4 ounces	2 to 6 drachms	
——— tincture of	½ to 1½ ounce	2 to 3 drachms	in water.
Soluble tartar	1 to 8 drachms	½ to 2 drachms	ditto.
Solution of acetate of morphia	10 to 60 or 100 drops	2 to 6 drops	ditto.
Spirit of mindererus	1 to 3 drachms	20 to 60 drops	ditto, thrice daily.
——— wine	½ to 1 drachm		
——— nitre, sweet	½ to 2 drachms	10 to 12 drops	ditto.
——— sal volatile	½ to 1 drachm	5 to 12 drops	ditto.
——— ammonia	½ to 1 drachm	5 to 8 drops	in water.
Sponge, burnt	1 to 4 drachms		in jelly, twice a day.
——— lozenges of	1 to 3, thrice daily		
Squill powder of	1 to 3 grains	¼ to ½ grain	in pill.
——— oxymel of	½ to 2 drachms	10 to 20 drops	in water.
——— tincture of	10 to 60 drops	2 to 6 drops	ditto.
——— pill	10 to 20 grains	2 to 3 grains	
Steel—see Iron			

MEDICINES.	DOSES. Adults.	Children from 1 to 8 Yrs.	Proper vehicle, &c.
Sulphur, flowers of	½ to 2 drachms	10 to 20 grains	in treacle.
——— milk of	ditto	ditto	ditto.
Syrup of poppies, or opium	1 to 6 or 8 drachms	not suitable	
——— buckthorn	1 to 2 drachms	½ drachm	in water.
——— ginger	1 to 4 drachms	½ to 1 drachm	ditto.
Tincture of aloes, compound	½ to 2 drachms	20 to 30 drops	ditto.
——— ethereal	½ to 3 drachms	ditto	ditto.
——— assafœtida	½ to 2 drachms	10 to 20 drops	ditto.
——— bark, compound	1 to 4 drachms	20 to 60 drops	ditto.
——— benjamin, compound	½ to 2 drachms	10 to 30 drops	on sugar.
——— cantharides	10 to 60 drops		in water, thrice daily.
——— cardamoms, compound	½ to 2 drachms	10 to 20 drops	in water.
——— cascarilla	½ to 4 drachms	20 to 50 drops	ditto.
——— catechu	ditto	ditto	ditto.
——— columba	ditto	ditto	ditto.
——— gentian, compound	1 to 2 drachms	20 to 35 drops	ditto.
——— guaiacum, ammoniated	ditto	ditto	on sugar.
——— jalap	1 to 4 drachms	½ to 1 drachm	in water.
——— lavender, compound	1 to 2 drachms	15 to 20 drops	ditto.
——— myrrh	½ to 1 drachm	10 to 15 drops	on sugar.
——— valerian, ammoniated	1 to 2 drachms	15 to 20 drops	in water.
Turpentine, Venice	20 to 60 grains	4 to 6 grains	in pills.
——— oil of	10 to 60 or 100 drops	5 to 10 drops	in water.
Valerian powder	1 to 3 scruples	5 to 10 grains	ditto.
Vitriol, elixir of	15 to 40 drops	5 to 6 drops	ditto.
Vitriolic acid, diluted	ditto	ditto	ditto.
Wine of steel	1 to 4 drachms	20 to 60 drops	ditto.
—— of meadow-saffron	10 to 60 drops	5 to 8 drops	ditto.
Wormwood, salt of	10 to 30 grains	3 to 5 grains	ditto.

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ON THE DISEASES OF FEMALES;

A Treatise illustrating their Symptoms, Causes, Varieties, and Treatment. With numerous instructive Cases. Including the Diseases and Management of Pregnant and Lying-in Women. Designed as a Companion to the Author's "Modern Domestic Medicine." Containing an Appendix on the proper Principles of the Treatment of Epilepsy.

By T. J. GRAHAM, M.D.

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